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Report of the

EXPERT CONSULTATION ON THE CONDITIONS OF ACCESS TO THE FISH RESOURCES OF THE EXCLUSIVE ECONOMIC ZONES

Rome, 11-15 April 1983

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

REPORT OF THE EXPERT CONSULTATION ON THE CONDITIONS OF ACCESS TO THE FISH RESOURCES OF THE EXCLUSIVE ECONOMIC ZONES

Rome, 11-15 April 1983

A Preparatory Meeting for the FAO World Conference on Fisheries Management and Development

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome 1983

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PREPARATION OF THE DOCUMENT

This document is the report of an Expert Consultation held in preparation for the FAO World Conference on Fisheries Management and Development. The Consultation was held in Rome, 11-15 April 1983. The document includes the report of the Consultation as approved by the 15 participants, and the basic working papers presented at the Consultation.

ABSTRACT

With the extension of national jurisdiction, both coastal States and distant-water fishing States have had to make major adjustments with regard to the management and use of the fishery resources within the EEZs. This document examines some of the important elements of the adjustments. It reviews the background in terms of the new Convention on the Law of the Sea and recent State practices. It then turns to an examination of the access conditions that can be mutually advantageous to all parties. Finally, it reviews the prospects for cooperation with respect to common interest fisheries. Background papers on the various topics are included in the Annexes.

Distribution:

Participants
FAO Fisheries Department
FAO Regional Officers
Directors of Fisheries
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OPENING OF THE CONSULTATION

1. The Expert Consultation on the Conditions of Access to the Fish Resources of the Exclusive Economic Zone was held in Rome, Italy, 11-15 April 1983. The Consultation was called as one of the preparatory sessions for the FAO World Conference on Fisheries Management and Development whose Technical Session will be held in 10-19 October 1983 and whose Policy Session will be held in 1984. There were 15 experts participating in the Consultation, invited in their personal capacity rather than as representatives of their governments or organizations. A list of experts and authors is given in Appendix 1 of this report.

2. The Consultation was opened by the Chairman, Mr. James S. Campbell. Dr. Deb Menasveta delivered a welcoming address on behalf of the Assistant Director-General for Fisheries of FAO.

3. The Consultation considered and adopted the provisional timetable, as given in Appendix 2. The documents which were prepared for the Consultation are listed in Appendix 3 and presented as part of this report in Annexes 1 to 18.

4. The Consultation was chaired by Mr. James S. Campbell. Dr. James A. Storer was Discussion Leader for Agenda Item 3 - "Revenues and Other Economic Benefits"; Mr. Juan Prat was Discussion Leader for Agenda Item 4 - "Access Conditions and Procedures"; and Mr. B. Seck was Discussion Leader for Agenda Item 5 - "Prospects for Cooperation with Respect to Common Interest Fisheries".

BACKGROUND

International Law Relating to Access Conditions

5. The papers considered under this Agenda Item were:

AC/10 : The Legal Regime with Respect to Fisheries under the United Nations Convention on the Law of the Sea, with a Brief History of the Negotiations Leading up to the Adoption of the Convention (Preliminary Draft), by the Secretariat for the UN Conference on the Law of the Sea

AC/1 : 1982 Convention on the Law of the Sea Provisions on Conditions of Access to Fisheries Subject to National Jurisdiction, by Prof. W.T. Burke (University of Washington)

AC/12 : The Practice of Coastal States Regarding Foreign Access to Fishery Resources (An analysis of bilateral agreements), by J. Carroz and M. Savini (FAO)

6. In introducing his paper, Professor Burke stressed what he considered to be the very wide discretion or authority under the Convention given to the coastal State over the resources in its 200-mile zone. Article 61 gave the coastal State a wide discretion in the establishment of the total allowable catch of living resources for its zone. In making this determination, the coastal State would not be confined to purely biological factors, but could also take into account other pertinent matters, including economic, environmental and other factors. Certain limits were provided for under Article 61. An upper limit on the level of exploitation would be set by the obligation not to endanger the maintenance of the living resources, although this seemed a difficult limit to reach. Avoiding threats to associated and dependent species on the other hand, would present problems of multi-species management of very considerable, almost unsurmountable, complexity.

7. Once a surplus had been declared, the coastal State would be under an obligation to give access to other States. Considerable discretion would be given to the coastal State under the Convention in the allocation of access and the setting of the terms and conditions under which access could be enjoyed. It was his opinion, however, that in the setting of access conditions under the Convention, coastal States would be subject to the test of reasonableness and good faith, and that conditions that were unrealistic and had the effect of denying access would not be in conformity with the Convention.

8. In introducing paper AC/12, Mr. Savini indicated that it was complementary to that of Professor Burke dealing with State practice as revealed in bilateral agreements rather than conventional law. Main issues noted were a tendency towards longer term agreements, now that some experience had been gained, and a move towards regional groupings, both of flag States (as in the EEC) and among coastal States (as in the South Pacific and West Africa). Mr. Savini also discussed the treatment of the concept of surplus in bilateral agreements, criteria for the allocation of surplus, conditions of access, surveillance and control and dispute settlement.

Discussion

9. Much of the discussion that followed centred on the discretionary powers of the coastal State with respect to the establishment of the allowable catch and the declaration of surplus. Some participants made the point that the concept of reasonableness should extend to these determinations. It was also noted, however, that disputes over these decisions by a coastal State are not subject to compulsory dispute settlement procedures under the Convention. The difficulties faced by developing coastal States in undertaking the necessary scientific work were emphasized. A strong call was made for assistance by FAO in the training and strengthening of national administrations in order to be able to fulfil the tasks and take advantage of the opportunities presented by the new regime of the sea. The need for regional cooperation in the setting of allowable catches, particularly where shared stocks were concerned, was also noted.

10. One participant stressed the emphasis given in the Convention to optimum utilization of the resource. He felt that the wide discretionary powers given to coastal States under the Convention could result in under- or over-exploitation and called for efforts to avoid the wasting of resources.

11. The different approaches towards, or concepts of, bilateral agreements were noted. In some cases these represented fully negotiated terms and conditions, in other cases the agreements were more like licences with the terms set unilaterally by the coastal State. Agreements with developing countries tended to be broader than mere access arrangements and aimed more at optimum utilization of the resources through cooperation.

12. The Consultation noted that the discussions on the provisions of the Convention were informal and did not attempt in any way to establish any definite interpretation of the provisions of the Convention.

Trends affecting the demand for access by foreign states and national considerations affecting coastal States interests in granting access

13. The papers considered under this Agenda item were:

AC/2 : Trends Affecting the Interests of Distant-Water Fishing Nations and Outlook for the Future, by P. Adam (OECD)

AC/4 : Conditions of Access to Fisheries: Some Resource Considerations, by J.A. Gulland (FAO)

AC/14 : Some Considerations on the Adaptation of National Policy in a Distant-Water Fishing Nation to the Recent Evolution of the Law of the Sea, by J. Prat y Coll

14. Mr. Adam's paper traced the trends affecting distant-water operations through three stages:

(1) Before the New Regime, when far distant fleets competed on the same grounds, though often in the face of unequal economic situations.

(2) The First Years of the New Regime, during which far distant operations were excluded from many fishing grounds and suffered increased costs as conditions of fishing in others. On balance, the difficulties for many distant-water States were due more to cost increases than to EEZs.

(3) Future Far Distant Fishing Activities, which were likely to result in far distant fishing operations facing cost increases which could not be recouped through price increases for fisheries products as these would be limited in international markets by competition with other foodstuffs which were not likely to be subject to the same pressures of rising costs.

15. When introducing his paper, Dr. Gulland noted that even without the questions of economic and social considerations, it was difficult from a biological standpoint to establish the right amount of fish to be taken from any fishery, because the research required was expensive, there was inherent variability in the biological systems involved, and the multi-species interaction questions were complex.

16. Dr. Gulland went on to note that the danger of extinction of a species was often overplayed. The prospect of depletion of a resource was the real problem.

17. In the area of establishing allowable catches and any associated surpluses it was important to assess the gains and losses from foreign participation. Such losses could include:

- Impact on catch rates in local fisheries
- The cost of monitoring, surveillance and control
- The possible negative impacts of attempting to adopt large-scale high technology fishing techniques which were often inappropriate for coastal state fisheries development

18. Mr. Prat, when introducing his paper, showed how the new regime had affected Spain. The Spanish industry, which had expanded its far distant industrial fishery operations during the 1960s, suffered economic dislocations from the impacts of the new regime, compounded by the effects of the oil crisis.

19. The employment impacts had been particularly severe since they were concentrated in a few regions of Spain where far distant fishing operations were an important component of economic activity. The Spanish Government had responded with a 6-point programme, comprising:

- The reorganization of domestic fisheries
- The reorganization of the far distant fisheries
- Improvements in the internal fish marketing system
- Foreign trade policy for fish products
- Foreign fisheries policy
- The expansion of the fisheries administration to meet the new complexity of fisheries management

20. Spain had successfully developed joint-venture fishing operations by offering incentives for Spanish vessels to enter into such arrangements.

Discussion

21. In discussing the trends affecting demands for access by foreign States, the experts noted that the distant water fishing operations were beset by the parallel impacts of rising costs, especially for fuel, and of the new regime. Distant water fleets were in decline. Fish imports in dsitant-water fishing States (DWFS) were rising, efforts were being made to increase the output from their own 200-mile zones, and there was some shift in consumption patterns away from the products traditionally supplied by distant water operations.

22. Distant-water fishing States had sought to make the necessary adjustments to these changes in their operations and to the new regime in various ways. A range of cooperative approaches with coastal States had been tried. Joint ventures had always seemed an appropriate vehicle for that cooperation, but results from joint ventures were seen by both coastal and distant-water States as mixed. To be successful over a long term, joint ventures required a stable operating and policy environment.

23. Inevitably, distant-water States have had to face the painful aspect of the adjustment in re-locating domestic resources, an adjustment that was particularly difficult when the impacts of the fishing industry decline were concentrated in particular regions.

24. Coastal States' interests in granting access varied widely. In some industrialized countries, pressures for the protection of opportunities for domestic fish catching and processing industries were strong. These states sought to take up as much as possible of the resource harvest available from their zones and market it themselves. Developing countries with aspirations to build up their own fishing industries were more generally interested in cooperation towards that end with distant water fishing interests; seeking technology transfer, training, research, development credits, infrastructural development, and access to markets. Developing States with fisheries resources which were likely to far exceed their fishing capacity in anything but the very long term were more generally interested in direct financial benefits such as fees, or in wider developmental assistance.

25. Foreign fisheries relations were also complicated by the range of conflicting interests involved. The Convention on the Law of the Sea made it clear that the fisheries resources of 200-mile zones were to be managed for the benefit of coastal States, but some participants stressed the view that the concept of optimum utilization required that the interests of all mankind needed to be taken into account. Within a State there were often conflicts of interest between components of the fishing industry, or between the fishing industry and wider national interests. It was also necessary to recognize that the problem of access for foreign fishermen frequently involved political factors and that access was a matter of international relations.

26. The experts also discussed the complex mix of public and private sector participation in fisheries access programmes. There had often been serious misunderstandings where governments had made arrangements within which the private sector was reluctant to operate or found it difficult to operate.

Forms of foreign participation in coastal States' zones and the bases for analyses of alternatives

27. The paper considered under this Agenda item was:

AC/11 : Forms of Foreign Participation in Fisheries: Coastal State Practice, by L.C. Christy & G. Moore (FAO)

28. This paper presented an overview of the three broad categories of possible forms of participation:

(1) Access licensing agreements
(2) Joint ventures
(3) Hybrid systems such as over-the-side sales

Discussion

29. It was first noted that in many cases bilateral fisheries relationships were based on more complex arrangements combining the various categories above.

30. The degree of involvement of coastal State governments or administrations was also discussed. Some experts suggested that when a flag State has long experience in fishing in a given fishery which the coastal State has no interest in exploiting itself, the flag State should be given flexibility in managing the venture in exchange for benefits to the coastal State. Other experts stressed the need for developing countries to be involved in all steps of the fisheries operations in order to allow them to improve their competence to manage and control their own resources.

31. With regard to option (i) above, it was mentioned that it provides a good opportunity for coastal States to obtain valuable information on the resources and to gain revenues in cash (licence fees) or in kind (e.g., in the form of fresh fish landed for domestic marketing). Such arrangements are rather flexible and, because they can be easily terminated, may be used as management tools to utilize temporary abundances in resources. They imply, however, a good deal of control by the coastal State.

32. Concerning joint ventures, the experts agreed that they are often a very good vehicle for transfer of technology and they may generate employment and foster the economic development of the fisheries in the coastal States. However, difficulties arising from social and cultural diversity should not be under-estimated. The success of joint ventures depends frequently on the type of fishing operation. When the resources are to be harvested by small boats operating far from their home port, joint ventures may be a convenient solution for both parties. This is, for example, the case in the Japanese shrimp fishery. On the other hand, when large and long-range vessels are involved, or when

fishing operations are very specific, joint ventures are frequently unsuccessful. It was also noted that if under a joint venture agreement the vessels of the distant-water fishing nations were obliged to fly the flag of the coastal States, the need for bilateral agreement would tend to become irrelevant.

33. With regard to hybrid systems, a lively discussion took place on over-the-side sales arrangements. The view was expressed that such arrangements may not be conducive to the development of the coastal State land-based industry. On the other hand some instances were noted where such arrangements could be the most appropriate option. Some discussion took place on the commercial large-scale test fishing operations which were conducted in Argentina. These test operations were followed by investments from the flag States in the Argentinian fisheries sector. It was noted, however, that this was a rather rare and exceptional type of cooperation.

REVENUES AND OTHER ECONOMIC BENEFITS

Background

34. The paper considered under this Agenda Item was:

AC/13 : Coastal State Requirements for Foreign Fishing, by Gerald Moore (Legal Office, FAO) (in draft form, to be published as FAO Legislative Study No.21 - Rev.1)

35. In introducing the paper Mr. Moore indicated that it was a revision of an earlier survey of coastal State conditions for access by foreign fishing States and that future up-dating is intended. He also described the series of regional fisheries legislation compendia being published by FAO. The paper and the compendium are not attached to this report but are available from FAO.

Discussion

36. The Consultation considered that the survey of coastal State requirements for foreign fishing is very useful both to coastal States and to foreign fishing States and should, if possible, be kept up-to-date and republished on a periodic, perhaps annual, basis. A number of suggestions were made for improving the survey, including the arrangement of entries on a regional basis and an indication of the date on which the entry for each State had been made or verified.

37. In introducing the pattern of the fees being charged throughout the world, Mr. Moore noted the wide variation in the level of fees and the way in which they were expressed. In general he noted that for the South Pacific, lump sum payments were popular although there was recently a move towards the setting of fees on a per-vessel trip basis. Fees in the Latin American region tended to be based on a per-vessel trip basis, using net vessel tonnage as a measure of fishing effort, while in West Africa most fees tended to be based on fishing effort measured in gross vessel tonnage or horse power. This difference reflects the different natures of the dominant fisheries concerned, tuna fisheries on the one hand and trawl fisheries on the other. For tuna fisheries in West Africa there was a new tendency for fees to be based on the amount or value of fish caught.

Levels of benefits and methods of deriving them

38. The papers considered under these items were:

AC/15 : Foreign Access to EEZs and the Derivation of Coastal State Benefits: Methods and Techniques, by Prof. Gordon R. Munro

AC/19 : Foreign Access Benefits in Fisheries, by Prof. John Gates

AC/7 : A Study on Fees and Other Economic Benefits: Foreign Fishing Access to the Fisheries of Exclusive Economic Zones of the States Participating in the South Pacific Forum Fisheries Agency, by L.G. Clark

AC/3 : Some Thoughts on the Effect of Trading Barriers on the Development of Fisheries in Some Coastal States, by J.S. Campbell

AC/6 : Implementation of Agreements with Foreigners, by H. Djalal

39. Professor Munro introduced his paper on assessing techniques available to coastal States for the purpose of extracting direct benefits from distant-water fishing States (DWFS). The major points arising from the paper are as follows.

40. If one views DWFS participation in EEZ fisheries as a form of international trade, in which coastal States can be seen as importing harvesting/processing services of DWFS, then it is easy to make the case that in many instances it will be in the economic self interest of the coastal States to have DWFS fishing in their EEZs on a long-term basis. Hence it is essential that techniques be assessed in terms of their long run, as well as their short run impacts. One must be particularly concerned about the impact of the techniques upon the willingness of DWFS to re-invest in fleet capacity. In assessing the techniques there was found to be a clear trade-off between cost and difficulty of implementation, and the degree of risk imposed upon the DWFS. Difficulties of implementation have implications for the long-term viability of the regime; imposition of risk upon DWFS has implications for DWFS willingness to pay.

41. Professor Munro then introduced the paper of Professor John Gates on methods of extracting direct benefits from distant-water States. This paper was concerned primarily with the problem of measuring the possible benefits the coastal State can obtain.

42. He essentially suggested two methods: The first and simplest method is to make use of the market by putting out access rights to auction. This approach will not be successful, however, if the interested DWFS are few. One must then apply various statistical techniques to the available data to estimate the ability to pay of individual DWFS.

43. Mr. Clark introduced his paper which drew largely on the access administration experience of the 16 States participating in the South Pacific Forum Fisheries Agency. The mix of benefits sought by those States largely reflected the sort of pattern which was developing in other regions. States with greater opportunities to mobilize resources for the development of their domestic industry had sought to direct gains from access to that end, while States for whom the constraints of capital and skills were more severe had generally sought to maximize direct financial benefits.

44. Various fee structures applied in the region covered by the South Pacific Forum Fisheries Agency. Most access agreements still involved lump sum fees which appeared to minimize implementation costs. Other agreements involved per vessel or per trip fees which were more attractive to foreign fishermen because of the greater flexibility they allowed, and appeared to provide for potentially greater fee receipts. The States in the South West Pacific had made a substantial effort to align or harmonize their national access arrangements, and recognized the possibility of joint fee systems as an attractive long-term option, although acknowledging the difficulties of reaching agreements.

45. In introducing paper AC/3, J.S. Campbell stressed the importance of access to markets for coastal States wishing to develop their own fisheries. In many cases access was impeded by a number of restrictions imposed by DWFS on the same fish to which those nations had or were seeking access. Such constraints on access to markets, examples of which were given in the paper, could be barriers to fisheries development. This could seriously affect the ability of coastal States to achieve optimum utilization and to extract maximum economic benefits from their fish resources.

46. The paper by Hasjin Djalal (AC/6) was not directly included. It provides a detail description of an arrangement between Indonesia and a DWFS based on the sharing of profits.

Discussion

47. During the discussion, there emerged several general points relating to all of the topics. There was general recognition that global fisheries are in a stage of transition resulting from the changed regime and other factors and that it is difficult, at this time, to sort out policies and actions based on immediate needs from those that might be based on longer-term needs.

48. Another general point that was made was that there are vastly different situations throughout the world and that this made it difficult to reach general conclusions. In this regard it was suggested that it would be useful to have a typology of the different kinds of fisheries, and different situations among the coastal States. Some of the differences included those between State-owned and privately-owned fleets; status of coastal State as a developed or developing economy; degree of under- or over-

utilization of the stocks; differences in value of the species; etc. It was also noted that many States have far distant-water fisheries, middle-water fisheries and coastal fisheries. Such differences need to be kept in mind in the examination of access conditions.

49. There was general agreement that considerations of access arrangements should be guided by principles of optimum utilization of the resources and of reasonableness. In this regard it was recognized that coastal States, in exercising their jurisdiction over the resources in their EEZs, should not expect foreign fishermen to accept conditions and terms that did not allow the foreign fishermen to receive a satisfactory return on their operations.

50. The discussion also covered several specific topics which can be classified as follows, although it must be recognized that there is a high degree of inter-relationship among them: (1) concepts about the benefits that can be derived by coastal States; (2) techniques for deriving the benefits, (3) the outlook for future demand for access to EEZs, (4) identification of the bone fide interests of the distant-water and coastal States, and (5) the role for FAO.

Concepts about benefits

51. The participants expressed several different and, sometimes, contrasting concepts about the benefits that should accrue to coastal States. Some of the participants characterized the benefits in terms of "rents", that is, revenues reflecting the value of the resource rather than the average earnings of individual vessels. A suggestion was made that fees might vary with the degree to which the stock was over- or under-utilized.

52. It was noted that, in some cases where stocks are over-utilized, decreases in the amount of fishing effort would reduce total costs without any reduction (and after allowing for stock recovery, with possible increases) in total catch and total revenues. In these cases, fairly high fees could be charged. Reference was also made to an auction mechanism, which is being used in at least one country, as a means for extracting the rents.

53. Another view expressed was that coastal States might receive a fair return for access to their resources which should be based on the economic returns of the individual vessels. It was noted that many distant-water fishermen are operating at the margin and are incurring increasing costs in labour and fuel at such levels that they cannot afford to pay high fees for access.

54. As another concept, it was noted that some States base their fees on the costs incurred in administering the arrangements with foreign fishermen.

55. Several coastal States conceive benefits in terms of the transfer of technology that would facilitate the development of their domestic fishing capacity. There was some discussion, in this regard, of joint ventures, but several participants commented that these were not always successful.

56. In some cases, information on fishery resources and on fishery opportunities was considered as a benefit to be obtained from foreign fishing. One participant cited the beneficial experience in his country of allowing foreign fishing on an exploratory basis as a prelude to a commercial arrangement. Other participants, however, found that the information provided by foreign fishermen was not always reliable.

57. The concept of reciprocity was also mentioned. Under this concept, States grant access to each other's zones. In one case, it was noted that two neighbouring States had created a common zone in which both could fish freely, though subject to certain quotas.

58. Providing access to foreign fishing vessels in exchange for access to the foreign countries' fish markets was also discussed.

59. Finally, several participants pointed out that access privileges were frequently governed by political rather than (or in addition to) economic considerations, and that these could lead to protectionist approaches severely constraining foreign access.

Techniques for deriving revenues

60. The various techniques for collecting revenues from foreign fishing operations (lump sum payments, fees per vessel or per vessel-trip, taxes on catch, etc.) were discussed. Different techniques are being used in different areas and for different kinds of fisheries. Several considerations were mentioned in the choice of technique to use.

61. One of these is the way in which the risks are shared. For example, if the risks are borne entirely or largely by the fishermen they will be willing to pay less than if the risks are shared with the coastal State.

62. Simplicity in administering the technique was also mentioned as important. In the case of the foreign State, one participant noted that lump sum payments, when the fee level is raised, were difficult for the distant-water State because of the difficulties of collecting fees from the fishermen. This participant expressed strong preference for a fee charged per vessel or, even more, for a fee per vessel-trip.

63. A contrary view was expressed by another participant from a coastal State who preferred the simplicity of a lump sum payment and who noted that this greatly reduced the costs of monitoring the operations.

64. Some participants expressed a preference for fees based on quantity of catch, with regard to highly migratory species, while others preferred fees based on effort.

65. Other participants also expressed the importance of simplicity and the necessity for adopting techniques that minimize the costs of compliance.

66. In connection with costs of implementation, although fees based on value of catch may be the most appropriate in certain conditions, it was noted that they tended to present problems of administration, particularly for developing coastal States, because of the difficulties of monitoring catch reports.

67. Different techniques may be desirable for different kinds of fisheries. For example, for fees based on effort, net register tonnage might be preferable for purse seiners since it is a fair indicator of carrying capacity, while gross tonnage or horse power might be better for trawlers.

Outlook for the future

68. There was a general feeling that most distant-water fleets would decline in the future and that the structure of foreign fishing in general would change. Several participants reported on measures being taken in their countries to limit or reduce the number of their vessels engaged in distant-water operations. These measures included reduction and withdrawal of subsidies, requirements that new vessels could only be licensed by retiring a much larger tonnage of old vessels, and by limiting construction of new vessels.

69. It was noted that there were factors other than the extension of jurisdiction leading to this decline, such as the rising costs of fuel and labour.

70. Mention was made that the increased difficulties encountered by distant-water fleets in certain States were leading to increases in imports and to increased development in aquaculture in order to maintain supplies of fish. However, one participant noted that in his country the change in conditions of supply was leading to a change in food habits.

71. It was anticipated by some participants that distant-water fishing would continue to shift away from some of the highly developed countries to mid-developed countries. In some situations this would occur through the use of capital investment from the highly developed countries. One participant noted that the shift to mid-developed countries might create some difficulties for coastal States because the new distant-water fishing countries tended to lack experience and extensive relationships with the coastal States. This could lead to difficulties in achieving harmonious relations.

72. For certain kinds of fisheries and situations, it was thought that developing coastal States would find it difficult to develop their own fish catching capabilities and that additional development

opportunities could be found in new arrangements, for example, in processing of fish rather than in fish catching. However, it was also pointed out that for certain products, distant-water vessels from highly-experienced countries would still be necessary because of the necessity for processing on board and because of the high skills and high technology required to obtain a satisfactory product.

73. Although it was anticipated that there would be a decline in the distant-water fishing operations of several of the countries, it was noted that some countries would find considerable difficulties in the process of the decline. These occur, in part, because of the problems of changing institutions associated with distant-water fishing that have been built up over many years and, in part, because of social and economic dislocation occurring from the decline. A suggestion was made that the adjustment process could be ameliorated by allowing for a phasing-out period.

74. The question was raised as to whether the present distant-water States would re-invest in large distant-water vessels as natural attrition takes place. The possibility was mentioned that a large dis-investment in distant-water fleets could, in some circumstances, lead to a reduced demand for access to some zones and, thereby, reduce the options available to the coastal States for deriving benefits. This could lead to under-utilization of resources where the coastal States do not have sufficient capacity to harvest the stocks.

Interests of Coastal States and Distant Water Fishing States

75. No attempt was made to reach agreement among the participants on the relative importance or value of the different interests or the different parties. However, it was thought useful to identify some of the important interests of each of the parties that could be recognized as genuine, bone fide interests.

76. For distant-water States, the following interests, not necessarily in order of importance, were identified:

(a) Access to resources to ensure optimum utilization.

(b) Stability in arrangements with coastal States.

(c) Sufficient time to phase-out operations, where necessary, in a manner that reduces social and economic dislocation.

(d) Regulations by coastal States that permit efficient deployment of effort in space and time and that allow efficient harvesting operations.

(e) Reasonable levels of fees.

(f) Timeliness in setting and communicating allocations in order to permit effective mobilization of fishing effort.

(g) Fees based on actual catches and value of species.

(h) Sufficient uniformity in conditions set by coastal States which share stocks to permit effective deployment of fishing effort throughout zones.

(i) Simplicity in conditions and regulations.

77. For coastal States, the following interests, not necessarily in order of importance, were identified:

(a) Fees based on value of the resources within their zones.

(b) Assistance in the development of domestic capacity.

(c) Information on catches, markets, etc., that is reliable and in a form usable by coastal States for decision-making.

(d) Access to markets in the distant-water States.

(e) Protection of coastal State environment and ensurance of safety controls.

(f) Responsibility of flag States for ensuring compliance.

(g) Sharing in the costs of management by distant-water States.

(h) Fees in an easily collectable form

(i) Assistance in general economic and social development.

Role for FAO

78. Several suggestions were made for activities by FAO that would facilitate improvements in the relations between distant-water and coastal States. The following suggestions, not necessarily in order of importance, were made, in addition to those made under other agenda items:

(a) Assistance to developing coastal States in developing their capabilities to acquire information (both basic data and analysis of the data).

(b) Assistance to developing coastal States in improving the usefulness of the information to decision-makers. This should include careful identification of the kinds of information necessary for decision-making and ways for presenting the information in the most useful forms.

(c) Assistance to developing coastal States in improving their capability to formulate management regulations and in improving their capability to negotiate on access conditions.

(d) The provision of more information on the status of fishery stocks and of ways for achieving optimum utilization. The provision of advice, in response to requests on the assessment of stocks, in EEZs.

(e) The provision of information on markets for fishery products.

(f) Facilitating cooperation among States with common interests in particular fisheries. In some cases this refers to cooperation among neighbouring States sharing common stocks. But it was also suggested that FAO might facilitate cooperation, upon request, between coastal States and distant-water fishing States in certain situations.

(g) More active involvement by FAO in the work of non-FAO regional bodies, especially in the scientific and technical committees.

79. The Secretariat noted that FAO was already involved in several of the kinds of activities suggested. But it also noted that much could be done to improve these activities along the lines suggested and expressed its appreciation for the useful discussion.

ACCESS CONDITIONS AND PROCEDURES

Principles applicable to information and compliance control

80. The paper considered under this Agenda item was:

AC/5 : General Guidelines for Monitoring, Control and Surveillance - Extract from the Report on an Expert Consultation on Monitoring, Control and Surveillance Systems for Fisheries Management (Rome, 27-30 April 1981)

81. This paper was summarized by Dr. C. Newton who also gave a description of the various FAO Regional Workshops on Surveillance and Enforcement. At these Workshops, the need was emphasized for coastal States to identify the extent and nature of their surveillance and enforcement requirements before purchasing expensive and sometimes unnecessary hardware. An assessment of such requirements could frequently be obtained by limited aerial surveillance.

82. Dr. Newton also advised that at the Expert Consultation on Regulation of Fishing Effort in January 1983 it was recognized that difficulties existed with most regulatory techniques presently used by coastal States (e.g., catch/effort/position reporting, limited or minimum mesh sizes), and that less costly techniques with greater emphasis on self-regulatory measures by the foreign fleets, must be introduced.

Assessment of access conditions and procedures

83. The papers considered under this Agenda item were:

AC/8 : Access Conditions and Compliance Control, by Dean Robb, Attorney, Agana, Guam

AC/17 : Japanese Experience in Access Conditions of 200-mile Regime, by Norio Fujinami, Special Adviser to the Minister of Agriculture, Forestry and Fisheries on International Affairs (Fisheries), Japan

84. For the purpose of his paper, Mr. Robb defined compliance as the degree to which a foreign vessel conforms its operations to the system of access conditions of the coastal State. Access conditions should also be construed in the widest sense as a system to include all aspects of access (e.g., process of allocation), and not be limited just to those matters provided for by legislation.

85. Consideration was given to six principles of access conditions which might aid compliance:

(a) Reasonable conditions: Reasonable conditions, which were pertinent to the particular type of fishery and fishing vessel and could be easily discharged by the fishermen were most likely to be voluntarily met and to encourage self-regulation. The best method to assure reasonableness and self-regulation appears to be through agreements between DWFS and coastal States rather than through unilateral prescriptions by coastal States.

(b) Reasonable information requirements: Coastal States should only seek information from foreign fishing vessels which is of real value to them and capable of being digested. The most cost-effective ways for obtaining this information, such as those that minimize disruption to fishing operations, should also be examined.

(c) Credibility: Where a coastal State lacks comprehensive enforcement capability it should seek to have full compliance with a modest compliance scheme, rather than minimum or sporadic compliance with a sophisticated scheme. The latter will lead to a lack of credibility and will ultimately break down.

(d) Cost effectiveness: It is to the advantage of all parties to minimize the cost of compliance because any cost of compliance will ultimately be shared.

(e) Regional harmonization: For many coastal States harmonization of regimes can increase the cost-effectiveness of compliance and enhance their respective enforcement capabilities. Regionally harmonized conditions of access can also assist foreign fishing fleets in meeting coastal State requirements.

(f) Appropriate sanctions: The setting and imposition of appropriate sanctions can be of considerable aid to compliance control. For example, indirect sanctions such as removal of future access rights, particularly on a regional basis, may provide more potent and cost-effective compliance control than the usual sanctions of seizure and fine. Also fleet-wide sanctions can be effective and may help to encourage the exercise of flag-State responsibility.

86. Mr. Fujinami outlined the Japanese experience in access conditions and discussed theconditions which could appropriately be applied to any fishery and those conditions which were specific to certain types of fisheries.

87. For the fisheries for highly migratory species, for example, the following conditions of access could pose difficulties for the foreign fishing fleet: 24 hour prior notice of entry or departure from the EEZ, provision of a prospective fishing plan in advance of entry, and port calls on arrival and prior to departure from EEZ. Merit was seen in having a table drawn up of the efficacy of all existing types of access conditions with respect to particular types of fisheries.

Discussion

88. Considerable discussion took place in regard to observer schemes, which worked well in some instances, but not in others.

89. Five underlying elements on conditions of access were identified and discussed:

a. Objectives of access conditions

90. Apart from access fees, the principle objective for many developing coastal States is to obtain resource and catch/effort data, as well as information on fishing vessel movements and activities in its EEZ. The phenomenon of the vicious circle was recognized, where in response to non-compliance by foreign fishing vessels, the coastal States often increased the severity of their conditions of access. This frequently resulted in increased non-compliance. One possible solution to this undesirable situation might be bilateral discussions held independently of the negotiating process, at which information could be made available. Such meetings could foster more understanding between the coastal States and the fishing States. Regional agencies or commissions might also facilitate this process. And, in addition, it could be useful for DWFS to have agents or representatives present in the coastal States.

b. Reasonableness of access conditions

91. There was a general feeling that compliance control conditions imposed by the coastal State should be reasonable. This means that in meeting the needs of the coastal State conditions should be selected that also take into account the legitimate interests of the distant-water fishing fleet and in particular the costs of implementation. Reasonableness of conditions would also be an incentive to self-regulation. It was recommended that a further technical meeting be held to assess the reasonableness of possible access conditions on the basis of specific fisheries and types of situation.

92. One participant insisted that the management of the fish resources in the EEZs should lead to benefits for the developing coastal States which, he reminded, have sovereign rights over the resources. Moreover, this is the declared aim of the forthcoming World Fisheries Conference.

c. Self-regulation by foreign fishing vessels

93. It was recognized that this is the most cost-effective compliance control and that access agreements of longer duration might encourage greater self-regulation. Such agreements could result in fishermen perceiving a long-term management interest in maintaining a healthy fishery, in the promotion of vessel replacement and, with such investment, greater incentives for compliance.

d. Flag State Responsibility

94. Flag State regulation of the activities of its vessels in a coastal State's EEZ was also considered a very cost-effective means for achieving compliance. Procedures already exist in several DWFS (e.g., USSR, Spain, Poland and Japan) for sanctions to be imposed upon any of their fishing vessels which contravene certain coastal State requirements. The implementation of the concept of flag State responsibility would call for wider adoption of Government to Government umbrella agreements which, however, may raise problems in connection with flags of convenience.

e. Harmonization of access conditions

95. It was recognized that certain harmonization of access conditions could usefully be achieved on both global and regional levels. At the global level there may be considerable benefit to be obtained from harmonization of such issues as standard specifications and identification (e.g., international radio call signs), codes of observer practices and standard boarding procedures. At the regional level benefits to both coastal States and foreign fishing fleets could be obtained by harmonization of access conditions relating inter alia to applications, reporting and log books.

PROSPECTS FOR COOPERATION WITH RESPECT TO COMMON INTEREST FISHERIES

Principles and issues of cooperation

Potential areas of cooperation for benefits to all participants

96. The papers considered under this Agenda item were:

AC/9 : Competences of the European Economic Community in the Field of Fisheries, by R. Simonnet

AC/20 : Forum Fisheries Agency: Relevant Agreements in FFA Countries

AC/16 : Eastern Pacific Ocean Tuna Fishing

AC/18 : Development of Living Resources and International Cooperation, by J.S. Campbell

97. Mr. Weiss introduced the paper on the EEC experience. He noted that the EEC has completely harmonized fisheries conditions because of and pursuant to the EEC's overall role as a regional body. The EEC acts, in effect, like a single coastal State managing one combined zone on behalf of the members of the community. Mr. Weiss noted that for this reason the EEC is not really an example of regional cooperation between individual States regarding their individual zones. EEC's laws regarding fisheries pre-empt any EEC individual member's laws; the EEC laws are enforced by individual member States.

98. Mr. Clark presented the following documents:

(a) Forum Fisheries Agency Convention (FFA)
(b) Nauru Agreement
(c) FFC Decisions

99. Mr. Clark explained that these documents were examples of regional cooperation in the Pacific (see also AC/7 re Joint Fee Systems) and reflected many of the underlying principles in regional cooperation among coastal States. In the South Pacific the main fishery is highly migratory tuna and regional cooperation is a necessity because the stocks are shared.

100. The FFA Convention recognized the member States' common interests in fisheries and the need for cooperation in management and conservation among themselves and, thereafter, with distant-water fishing nations. The FFA Convention created and set out the functions of the FFA in order to pursue these objectives.

101. Mr. Clark noted that cooperation in the FFA region had developed in recent years as follows: First, the FFA States shared data and information. Then they realized that further benefits would derive from harmonization of laws and access conditions. From this perception emerged the Nauru Agreement, an arrangement among certain coastal States' having major tuna fisheries in the South Pacific. The Nauru Agreement calls for certain minimum, uniform, conditions of access to be set in all States. It is expected that benefits to the coastal States as well as the fishing States would increase by standardizing such conditions. A series of implementing arrangements to the Nauru Agreement will set out in detail these standardized conditions. Subsequently, the measures agreed by those countries participating in the Nauru Agreement were largely taken up by a wider grouping of South Pacific States, as set out in the decisions of the South Pacific Forum Fisheries Committee. Like the Nauru Agreement, these decisions called for the establishment of uniform access conditions including reporting procedures, log book formats, vessel identification, observers and measures for facilitating compliance control such as the Regional Register. For the future, the States of the region were looking at the prospects for regional access and fee systems for groupings of coastal States. Such arrangements appeared to offer potentially large gains, but the constraints to their implementation were substantial.

102. Mr. Rodriguez presented the Eastern Pacific Ocean Tuna Fishing Agreements as follows: The history of the tuna fishery in the Eastern Pacific dictated the need to manage the resources and, thus, the coastal States and relevant distant-water fishing States agreed among themselves regarding fees and conservation measures. The Eastern Pacific Agreement has created a Council to manage licensing in the affected area. Use of the Council as a management decision-maker is intended to avoid possible political regional problems and offers opportunities for long-term policy decisions on a regional basis. The Agreement prohibits any action by members to embargo fish products of the other members and assures mutual access to markets. In short, the Agreement creates a platform for conservation measures and embodies the concept of regional access.

103. The protocol to the Agreement prescribes fees at $60 per net register ton per vessel per year. The Agreement is open for accession by other States and the fee will correspondingly increase but not to exceed $100 per net registered ton.

104. Mr. Lavender reviewed progress in regional cooperation in the Lesser Antilles. He noted that the Charter establishing the Organization of Eastern Caribbean States is the basis for this cooperation and is the vehicle through which FAO is assisting in harmonization efforts. He noted that such regional cooperation not only is of benefit with regard to access but also provides the basis for possible sub-regional development in fisheries by the coastal States themselves. However, at this point, effort is limited to harmonization of legislation regarding fisheries.

105. Mr. Campbell reviewed a paper he had written in 1976 and prior to the 200-mile EEZ. The paper dealt with the Pacific basin emphasizing the need for cooperation in fisheries and related trade. He said this paper emphasized shared responsibility over the fishery between coastal States and DWFS. But since 1976 and in the wake of 200-mile EEZs, there is an atmosphere of some distrust and friction between these sets of interests. Nonetheless, the goal of cooperation remains necessary and important and should be pursued in the South Pacific.

Discussion

106. Discussion then took place on the various levels at which cooperation might take place, i.e., bilateral, regional and world-wide.

107. At the bilateral level the Argentine/Uruguay Treaty in particular was examined as a good example of such cooperation. The Treaty establishes a common fishery zone. National allocations are made by species on the basis of the proportion of the fish resources contributed by each party. This contribution is evaluated both on economic and scientific criteria. The Treaty also provides that each Party can authorize third countries to fish in its national waters in the Common Zone within the limits of its own allocation. In other words the catch of these third country vessels is to be deducted from the authorizing Party's own national allocation. However, up till now, neither of the Parties to the Treaty has issued any such authorization.

108. At the regional level, it was recognized that a two-tier system of cooperation might be appropriate. The first involved cooperation among the coastal States of a region. The South Pacific Forum Fisheries Agency was examined as an example. This initially provided a vehicle for sharing data among the participating coastal States and then as a focus for the harmonization and coordination of their respective fisheries regimes with attendant benefits to both those States and the distant-water fishing States operating in that region, e.g., better information and bargaining position for the coastal States, reduction in compliance control costs, more effective resource management, facilitating access to distant-water fishing States and providing for similar conditions of access over a wide range of zones. Constraints to such cooperation could occur where there were differing levels of development among the coastal States and differing national fisheries objectives. Difficulties may also be occasioned by scarcity of funds. The type and extent of the fishery would also dictate the level and need for such cooperation.

109. The second tier of regional cooperation concerns the degree of detailed information required in access conditions, and the likely substantial costs to both the coastal States and the distant-water fishing States operating in that region. It was felt that one of the needs is to provide an unbiased forum for the exchange of scientific and economic information outside of the negotiating context. This, by giving a mutually accepted information base, could lead to a greater degree of trust between the parties which, in turn, can lead to a simplification of conditions of access, breaking the vicious circle which the meeting had previously considered. The need for such cooperation was particularly emphasized with respect to highly migratory species.

110. It was recognized that regional cooperation might appropriately be conducted through different organizations within the same region which exist for different but complementary purposes, e.g., Forum Fisheries Agency and the South Pacific Commission in the South Pacific and the International Baltic Sea Fisheries Convention and ICES in the Baltic.

111. The meeting confirmed the benefits to be obtained, in many cases, through regional cooperation, with particular emphasis on data exchange, and the more effective utilization of sometimes limited manpower resources. The Consultation specifically recognized that considerable benefits could be obtained from harmonization of access conditions on a regional basis for the reasons noted above, and considered that such regional harmonization should be actively encouraged.

112. On the world-wide level, it was agreed that meetings such as the present Consultation and the forthcoming World Fisheries Conference provide a useful forums in which the genuine interests of fishing and coastal States can be identified. This allows the real potentials for cooperation at all levels to be brought into sharper focus.

APPENDIX 1

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APPENDIX 2

TIMETABLE

Monday, 11 April

10.00	Agenda Item I: Opening and Introduction
10.30	Agenda Item II: Background
	A. International law relating to access conditions
12.00	Lunch
14.00	B. Trends affecting the demand for access by foreign States and national considerations affecting coastal States interests in granting access
	C. Forms of foreign participation in coastal State zones and the bases for analyses of alternatives
17.30	Adjournment

Tuesday, 12 April

09.00	Agenda Item III: Revenues and other economic benefits
	A. Background: Present level of revenues and other benefits paid
	B. Methods of estimating potential benefits under access arrangements
12.00	Lunch
14.00	B. Continued
16.00	C. Methods for levying fees or deriving economic benefits (e.g., lump sum payments, fees based on catches or effort, benefits-in-kind including technology transfer, training and development aid, access to markets) and duration of arrangements
17.30	Adjournment

Wednesday, 13 April

09.00	C. Continued
12.00	Lunch
14.00	Agenda Item IV: Access Conditions and Procedures
	A. Principles applicable to information and compliance control
15.00	B. Assessment of access conditions and procedures: identification of interests of participating States; alternative licensing procedures; provisions for acquiring information and compliance control at minimum costs to participants
17.30	Adjournment

Thursday, 14 April

09.00	B. Continued
12.00	Lunch
14.00	Agenda Item V: Prospects for cooperation with respect to common-interest fisheries
	A. Principles of, and issues raised by, cooperation
15.00	B. Potential areas of cooperation of benefits to all participating States (e.g., information exchange, harmonization of access conditions and joint access arrangements, reduction in information and compliance costs)
18.00	Adjournment

Friday, 15 April

10.30	Agenda Item VI: Review and adoption of the Report
12.00	Lunch
14.00	Continuation of Item VI
18.00	Adjournment

APPENDIX 3

LIST OF DOCUMENTS *

Annex Number	Author & Title	Agenda Item
1	W.T. Burke: 1982 Convention on the Law of the Sea Provisions on Conditions of Access to Fisheries Subject to National Jurisdiction	II A
2	J. Carroz & M. Savini: The Practice of Coastal States Regarding Foreign Access to Fishery Resources (An analysis of bilateral agreements)	II A
3	P. Adam: Trends Affecting the Interests of Distant-Water Fishing Nations and Outlook for the Future	II B
4	J.A. Gulland: Conditions of Access to Fisheries: Some Resource Considerations	II B
5	J. Prat & Coll: Some Considerations on the Adaptation of National Policy in a Distant-Water Fishing Nation to the Recent Evolution of the Law of the Sea	II B
6	L.C. Christy & G. Moore: Forms of Foreign Participation in Fisheries: Coastal State Practice	II C
7	J.M. Gates: Foreign Access Benefits in Fisheries	III B
8	Les Clark: A Study on Fees and Other Economic Benefits from Foreign Fishing Access to the Fisheries of Exclusive Economic Zones of the States Participating in the South Pacific Forum Fisheries Agency	III C
9	J.S. Campbell: Some Thoughts on the Effect of Trading Barriers on the Development of Fisheries in Some Coastal States	III C

* Two of the documents presented at the Consultation are not included in the Annexes. These are: (1) Gerald Moore, Coastal State Requirements for Foreign Fishing, which is available on request from the FAO Legal Office as Legislative Study No.21, Rev.1; and (2) Office of the Special Representative of the Secretary-General for the Law of the Sea UNCLOS, the Legal Regime with Respect to Fisheries under the United Nations Convention on the Law of the Sea, with a brief history of the Negotiations Leading up to the Adoption of the Convention (Preliminary Draft). This was a "preliminary draft" which has now been finalized and presented as an Information Paper to COFI, COFI/83/Inf.7.

Annex Number	Author & Title	Agenda Item
10	H. Djalal: Implementation of Agreements with Foreigners	III C
11	Gordon R. Munro: Foreign Access to EEZs and the Derivation of Coastal State Benefits: Methods and Techniques	III C
12	General Guidelines for Monitoring, Control and Surveillance	IV A
13	Dean Robb: Access Conditions and Compliance Control	IV B
14	Norio Fujinami: Japanese Experience in Access Conditions of 200-Mile Regime	IV B
15	R. Simonnet: Competences of the European Economic Community in the Field of Fisheries	V
16	Eastern Pacific Ocean Tuna Fishing Agreement	V
17	James Campbell: Economic Factors Influencing Development and Cooperation in Fisheries	V
18	South Pacific Forum Fisheries Agency: Relevant Agreements in FFA Countries	V

ANNEX 1

1982 CONVENTION ON THE LAW OF THE SEA PROVISIONS ON CONDITIONS OF ACCESS TO FISHERIES SUBJECT TO NATIONAL JURISDICTION

by

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I. INTRODUCTION

The purpose of this discussion is to review provisions of the 1982 Convention on the Law of the Sea (CLOS) regarding conditions of access to fisheries subject to national jurisdiction. The subject matter coverage includes areas and resources within national jurisdiction and some resources that are found within such jurisdiction but also move outside it. After brief clarification of the area and resources involved, the discussion turns to the applicable CLOS provisions.

A. Fish subject to one national jurisdiction

Coastal state jurisdiction includes living marine resources found wholly within a number of different areas in which it exercises sole authority including internal waters, territorial sea, archipelagic waters and exclusive fisheries or economic zone, and the continental shelf. The first three of these zones are subject to the sovereignty of the coastal State; of these only the new area of archipelagic waters created by the LOS treaty raises any jurisdictional issues worth discussion regarding fisheries.

The major area of concern for present purposes is the exclusive economic zone (EEZ), whose establshiment by the LOS treaty is probably the major innovation of the 3rd United Nations Conference on the Law of the Sea (UNCLOS). The EEZ and an exclusive fisheries zone, as established by many States, are similar but not necessarily identical in relation to fisheries and the Law of the Sea.

The continental shelf is mentioned here because sovereign rights over sedentary fisheries are often claimed in terms of coastal authority over the shelf and international agreements such as the CLOS deal with these species in such terms.

B. Fish subject to more than one exclusive zone

Some fish move into or are distributed across more than one jurisdiction and are exploited in more than one or affect associated stocks in other jurisdictions. For present purposes we are concerned solely with stocks occurring within exclusive economic zones because the LOS treaty deals only with this situation. The management problem occasioned by multiple zone involvement may vary with the nature of the movement involved and the different interests of the States concerned (Gulland 1980) but the legal questions do not appear to be affected by these differences.

C. Fish available within and beyond exclusive zones

Some fish move extensively so that they are found within the EEZ and also beyond. Some of these may be accessible for harvesting only within or only beyond or in both places simultaneously. Accessibility in these different areas may vary from season to season or year to year. The difficulty of the management problem may vary in accordance with accessibility of the fish but in general these fish cannot be managed successfully within one national zone.

Anadromous fish present special problems because their continued existence depends upon actions taken by the host State which can drastically affect future abundance, including ultimate survival of the fish species. Such fish are always accessible to harvest in host State waters and can be most effectively managed if exploitation is limited to these waters. But they are also accessible outside national jurisdiction and are commonly caught there. In some instances this harvest occurs outside any national jurisdiction and sometimes it occurs in the foreign state's fishing or economic zone.

II. LAW APPLICABLE TO AREAS AND FORMS OF NATIONAL JURISDICTION

A. Territorial sea

It is universally agreed that a coastal State enjoys sovereignty over all living resources found within the limits of national territory as well as over the area in which they are located. Access to such resources by a foreign fisherman requires authorization by the coastal State. Any regulations affecting exploitation are those of the coastal State except as may be modified by agreement.

B. Archipelagic waters

The concepts of "archipelagic State" and "archipelagic waters" are essentially the creation of the LOS treaty negotiations although a few national claims were advanced earlier. These concepts are not yet widely recognized outside that treaty. Under the treaty the archipelagic State has sovereignty over archipelagic waters and therefore would normally have complete authority over fisheries except for two articles that qualify that authority. Both Article 47 and Article 51 require the archipelagic State to recognize existing and traditional fishing rights of an immediately adjacent neighbouring State in specified areas of archipelagic waters. It is worth noting that preservation of these fishing rights applies only within the archipelagic waters, i.e., within the waters circumscribed by the baselines around the islands, and not within the zones delimited from the baselines 1/.

C. Exclusive economic zone

Under the LOS treaty a coastal State has sovereign rights for the purpose of exploring and exploiting, conserving and managing living resources of the seabed, subsoil and superjacent waters within the exclusive economic zone, which zone "shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured." If a coastal State has established the maximum territorial sea permitted by the treaty (12 nautical miles), it may therefore exercise these sovereign rights in a further zone of 188 nautical miles.

These rights pertain to all living resources found within the zone with one exception - seabed and subsoil rights concerning living resources are to be exercised in accordance with the separate CLOS provisions on the continental shelf. These are discussed below. Some species are also the subject of additional articles and are discussed separately below, including highly migratory species listed in Annex I of the treaty, anadromous species, and marine mammals.

The basic sequence of decisions under CLOS affecting access to the fisheries of a particular coastal State is as follows. The coastal State: (a) determines the allowable catch of its fishery resources by deciding how much a particular species or stock can be targeted for harvesting or otherwise permitted to be caught incidentally; (b) determines how much of the particular stock can be harvested by the coastal State; (c) if the allowable catch exceeds this domestic harvesting capacity, it decides who else gets access and establishes the terms and conditions thereof;(d) concludes agreements or other arrangements to govern access by foreign vessels to available fish; (e) in deciding upon the allowable catch, the coastal State also determines what restrictions on harvesting are required by the effects of fishing on target stocks upon other stocks.

1/ However, elsewhere in the treaty States who have been fishing in an area that becomes EEZ are mentioned. Article 62(3) provides for taking such States into account when the coastal State decides to give access.

Each of these decisions might affect access by foreign fishermen and can be regarded as a condition of access. In respect of some species the initial decision of an allowable catch and the decision about access must be preceded by advance consultations or negotiation with other States either directly or through an international organization.

The discussion hereafter focusses on the specific treaty provisions that affect or might affect foreign access to the fisheries of an economic zone. The emphasis is upon the legal competence or authority of the coastal State tc decide upon conditions of access, including the authority to decide whether any access will be permitted. However, it also must be emphasized that possession of legal authority does not compel its use. Often, benefits to the coastal State from foreign fishing are sufficient to counsel against exercise of the authority to forbid it. Accordingly the statements made hereafter to the effect that the coastal State may lawfully exclude any foreign fishing even if a biological "surplus" undoubtedly exists should not be understood as proclaiming that the exercise of this authority is desirable. It seems reasonably obvious that it will be better sometimes to sell access rights to foreign fishermen than to restrict access to local fishermen alone.

1. Total allowable catch

Article 61 of the treaty provides that the coastal State "shall determine the allowable catch of the living resources in its exclusive economic zone". The allowable catch established by the coastal State would normally embrace both those stocks harvested intentionally either for commercial or recreational or other purposes (such as scientific) and those incidentally taken in the course of taking a target species. In actual management situations the level of permissible incidental catch may be more significant for fishermen than the target catch level because regulations may terminate harvesting the target catch before it has reached the level originally allowed for it. If the permissible incidental catch is taken first, some coastal State regulations require that fishing for target species be halted even though it is far short of the permissible yield.

The use of the mandatory "shall" indicates that deciding an allowable catch is an obligation of the coastal State, but the scope of that obligation is not also specified. Common sense would suggest that the obligation does not require purely theoretical calculations but rather applies to stocks that are believed to be significantly affected by exploitation whether as target or incidental catch. Accordingly, unless there is some actual or highly probable exploitation, a coastal State would not be in default of its obligation if it did not determine an allowable catch. This means that despite the literal language of Article 61 the coastal State is not required to determine an allowable catch for all "living resources" of its EEZ.

The treaty clearly provides that the determination of the amount of allowable catch is at the coastal State's discretion. Article 61 contains only the very general limitation that the coastal State is obliged to employ measures to "ensure" that "the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation". This is a very generally worded obligation that imposes but slight restriction on coastal authority, as noted further immediately below. Apart from this qualification, which only limits the maximum catch allowable, the coastal State may set the allowable catch as it may wish. Further confirmation of the broad authority of the coastal State in this regard is evident in the provisions dealing with dispute settlement in the context of fisheries. Article 297(3)(a) excerpts from the otherwise applicable compulsory and binding procedures of Part XV of the treaty, any dispute relating to the coastal State's "discretionary powers for determining the allowable catch" of living resources in the EEZ. (Further discussion of dispute settlement in relation to access is to be found below.)

The term "allowable catch" may be responsible for some confusion regarding the treaty, particularly because the term is often associated with practices under international agreements in the North Atlantic in which quotas were established on the basis of a biologically determined maximum catch (Hoydal 1983). I think it is demonstrable that "allowable catch" in CLOS Article 61 is not to be interpreted as a quantity of fish determined solely on biological grounds.

Article 61(3) is the critical provision for interpretation of "allowable catch" in paragraph 1. It says that conservation measures aimed at avoiding over-exploitation "shall also be designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, ..." Some of these factors are identified but the listing is expressly not exhaustive. It seems abundantly clear that if a coastal State is not obligated to maintain abundance at an MSY level, it is also not obligated to establish an allowable catch at the MSY level. It cannot normally do both at once, i.e., maintain abundance at a level greater or lesser than will produce the MSY and establish an allowable catch of MSY. Accordingly the coastal State determination of allowable catch under Article 61 is not required to be tied to any notion of a fixed quantity of available fish that is based solely upon a stock assessment or upon any biological assumption about what the stock will yield at the maximum.

It is true that Article 61 mandates an "allowable catch" and appears to assume a numerical quantity is to be specified. But, however undesirable this approach may be from a management point of view, the numerical quantity need not reflect only biological considerations. The final specifications of an "allowable catch" as a quantity of fish can be a reflection of a range of factors that the coastal State believes are important to its interests. Article 61(3) refers to "relevant environmental and economic factors" that may determine the yield that can be taken of harvested species. "Environmental" may be taken to refer not simply to biological or ecological concerns, because these are referred to in the concept of "maximum sustainable yield" and in the following paragraph's reference to other species, but to all those factors that set the context within which the fishery operates. In determining an "allowable catch" the coastal State is entitled to take into account a similar range of factors.

2. Measures to protect against over-exploitation

The stated obligation to "insure" that the "maintenance of living resources in the exclusive economic zone is not endangered by over-exploitation" is vaguely worded and appears mostly to be an insignificant burden. The phrase "maintenance of the living resources" is unclear because it does not specify the level to be maintained nor precisely what should be maintained. Fishermen do not simply fish for resources, they seek out particular types of fish by species and size. Exploitation within the zone in all probability concerns only a part, perhaps only a tiny part, of the total biomass of living resources in the zone. Furthermore such exploitation would typically target on only a portion, perhaps a very small portion, of a species. Even if all of a target population were harvested it might have little if any effect on the species of which it was a part.

An interpretation that "living resources" meant a particular stock of fish that is exploited does not make much sense if it can be shown that the stock is simply a portion of a species group. Reducing such a stock to the point of being "endangered" would have no effect on the species and might reflect sound local policy. Perhaps there are instances in which a particular stock constitutes all of a particular species and in such a case the obligation to avoid endangering by over-exploitation reflects a sensible approach, but this situation is probably unusual.

A major potential difficulty, however, is that it may be very difficult to know whether a target stock is simply a portion of a larger species or is itself a separate species. Because this determination is difficult to make, the treaty should probably be interpreted cautiously to require coastal States to limit the total catch of a "stock" or "population" in its EEZ. Even if, for example, pulse fishing is a desirable policy as a general proposition - according to which a stock is fished very intensely and then left (hopefully) to recover before allowing renewed fishing upon it - a coastal State should pay careful heed to the treaty injunction that the "living resource" involved not be "endangered" by such a degree of exploitation. If the fishing were upon a separate species, it could conceivably be "endangered" by excessive exploitation under the guise of pulse-fishing. While taking practically all of a portion of a species may be harmless because it does not endanger a species, it is advisable to err on the side of caution and make allowance for uncertainty about the characteristics of the fish being taken.

These comments are generally applicable but they are most specifically relevant for regulating the taking of anadromous species that are uniquely associated with runs from specific river locations. The fish composing such runs might actually be genetically so distinct as to constitute separate species. Accordingly it may be necessary to regulate the harvest of salmon so as to avoid the possibility of endangering these runs or "species".

3. Permissible yields: MSY and optimum yield

The coastal State's measures to ensure that living resources are not endangered by over-exploitation "shall also be designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors ... "(Art. 61(3). This establishes that a coastal State is not required to manage fisheries to produce the maximum sustainable yield if it does not wish to do so. Instead the coastal State is expressly authorized to manage for yields that are suggested by its environmental and economic interests.

The specific reference in Art. 61(3) to "environmental and economic factors"raises the question of whether these are the only factors that can be employed to determine what the permissible catch may be. For example, it is intended from this formulation that "social" or political considerations cannot be taken into account? This seems unlikely. As noted earlier, the term "environmental" may be taken to include all major features of the situation for which the coastal State initiates management measures. To read this phrase restrictively, and to exclude social or political concerns from fishery management, would be inconsistent with the basic authority of the coastal State established in Article 56, namely that it has sovereign rights for exploring, exploiting, conserving and managing these resources. Management in the normal sense encompasses regulatory measures embracing a variety of objectives, with social and political elements foremost among them. The "sovereign right" to manage would usually be regarded as including these objectives and there is nothing elsewhere in CLOS (than Art. 61) to indicate a different concept of "sovereign right" is intended. For these reasons the omission of express reference to "social" considerations should not be regarded as limiting coastal authority as broadly established in Article 56.

Specifically this means that the coastal State may maintain a level of population abundance, short of endangering the resource, that meets its interests as it determines those interests. It might decide to maintain a level of abundance greatly in excess of that which would produce MSY because this would assure higher catch rates and lower costs. The coastal State conservation and management measures may be selected, under the LOS treaty, to serve the interests of the coastal State some of which the treaty specifies by referring to "the economic needs of coastal fishing communities and the special requirements of developing States, and taking into account fishing patterns, the inter-dependence of stocks and any generally recommended international minimum standards, whether subregional, regional or global".

For many, if not most, coastal States, there would be no advantage in refusing to allow its resources to be exploited as fully as abundance will safely allow. The exercise of coastal discretion to set the allowable catch would in such circumstances mean permitting yields that allow for foreign fishing. The problem then is simply that of deciding upon the safe limits on catch and deciding who gets access and upon what terms and conditions. It may still be in the coastal State's interest to provide for some restricitions on the level of fishing effort since by doing so it may be able to extract more return than otherwise from the foreign fishing.

4. Scientific standards in adoption of conservation and management measures

In adopting measures the coastal State is to take into account the "best scientific evidence available to it". This appears to mean that the coastal State may proceed to adopt measures even though its basic evidence is not complete or as fully verified as might be possible. More specifically, the coastal State may proceed to make conservation and management decisions even though there is a gap in the data available or the interpretation of certain data is uncertain because it is incomplete or not fully understood.

An important major issue in this connection is how much effort a coastal State is required to exert to improve the quality and quantity of available evidence. If the coastal State is obliged to determine the TAC and to ensure against endangering a resource, is it required to invest resources in the effort to develop better data than previously available for its decisions? Nothing in the treaty expressly addressed this question. However it might be inferred from the repetition of the term"available" (in paragraphs 2 and 5 of Article 61) that the coastal State's primary duty is to make use of the evidence accessible from normally expected sources and the treaty imposes no express duty to improve what might be available or go beyond these sources. The emphasis on "available" might reasonably be understood to signify that there is no absolute duty to pursue data and information except what might otherwise be secured in light of the coastal State's ability to allocate resources and skills to the task.

In this context the term "available" refers not only to data in the hands of the coastal State but also should be understood as including data or evidence from other sources, including foreign fleets, international organizations, and from other States involved in the fisheries under management. Under Article 61(5) the various entities mentioned are expected to contribute and exchange "available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks". The coastal State is authorized to condition access to its EEZ upon provision of information that it specifies, including catch and effort statistics, and upon the conduct of fisheries research and the reporting of scientific data. Any data and information that might reasonably be obtained from these sources should be considered "available" to the coastal State. Failure to seek or to use such data and information should not be permitted as a defense against a charge of failure to discharge a treaty obligation.

5. Obligation to consider effects on associated or dependent species

Most fisheries are multispecies in nature in the sense that they target on more than one species or for other reasons significantly affect more than one. Accordingly the occasion to consider effects of fishing on non-target species may frequently arise. The CLOS obligation in this regard is in Article 61(4) which declares that "... the coastal State shall take into consideration the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened".

The question of what is included in the terms "associated or dependent" species is not answered in the treaty. A recent study stated that these terms do not yet have a common usage and are vague in nature (Dawson, 1979). Another recent paper assumed that associated species included "incidental catches or by-catches" and that dependent species included predator-prey or more distant food or other biological relationships (Burke, 1982). It was noted that fishery effects differ greatly in these various situations and that effects may range from negligible to catastrophic. A particular problem may arise with marine mammals because they are so susceptible to incidental catch and to depletion even by moderate fishing.

Whatever the terms may mean, it seems likely that States will encounter considerable difficulty in discharging this obligation. Knowledge and understanding of the intricate ecosystems involved in 200 mile zones is insufficient to permit successful ecosystem management. A recent authoritative report observed in this connection:

> "The management implication of the term 'ecosystem management' presumes a reasonable understanding of the physical and chemical environment and biological species which describe an ecosystem, plus an understanding of the interactions among and between the species complex and their environment. Effective ecosystem management would also require an understanding of the flow of material energy and nutrients within the ecosystem. At present the totality of interactions is not sufficiently understood in any ecosystem to allow for comprehensive ecosystem management" (FAO 1979).

On the other hand in specific instances the relationship between fishing and an excessive incidental catch may be well-established and a coastal State might be charged with failure to discharge the obligation in Article 61(4). To the extent fishery mortality must be reduced to take into consideration the effects on associated or dependent species, conditions of access might well be affected. Foreign States seeking such access might be critical of coastal State actions reducing their access when it is allegedly justified by such consideration. But, as already noted, the coastal State has discretion in establishing the allowable catch and applicable terms and conditions, so that effective protest will be without a solid legal basis.

6. The obligation to promote optimum utilization

In an effort to negotiate a basis for continued access to areas of extended jurisdiction, States with distant-water fleets (DWFN) tabled various proposals in the LOS negotiation designed to achieve that. The principal distant-water fishing States, the USSR and Japan, suggested formula that would substantially insulate their fleets from coastal State authority. The United States initially sought the same objective through a principle of full or maximum utilization that would benefit DWFN and

through its proposal that so-called highly migratory species would be managed solely through an international organization. Australia and New Zealand tied coastal State control of access to its harvesting capacity and where the latter was 100% of the allowable catch, provided for phase-out of foreign vessels in a 5-year period.

LOS treaty Article 62 differs considerably from all proposals except those conferring full, unrestricted control on coastal States. Entitled "Utilization of the Living Resources", it obliges the coastal State to "promote the objectives of optimum utilization of the living resources in the exclusive economic zone without prejudice to Article 61." This language makes it clear that the treaty does not have any obligation of "full" or "maximum" utilization of fisheries in the EEZ.

First, the term chosen is "optimum utilization" despite the U.S. proposal employing "maximum". Such a choice emphasizes that the objective of management need not be classified or measured only in terms of the largest possible catch of fish. "Optimum" permits consideration of a variety of objectives in management. This selection of a term is more significant because while the fishery provisions of CLOS generally follow the structure of the United States proposal they differ from it in this specific instance as well as in other operational concepts and details.

Second, Article 61 obliges the coastal State to "promote optimum utilization", which assumes that it is the coastal State which has the decision-making authority. No other State could implement the goal of optimum utilization (however defined) because none have any claim to competence to choose management goals, policies, principles or tactics in the EEZ although States whose nationals fish for anadromous and highly migratory species do have a claim to be consulted or engaged in some cooperative activity leading to a choice by a coastal State. In any event the injunction to "promote" a particular objective seems neither onerous nor especially demanding other than possibly forbidding extreme options such as prohibiting, without reason, any use of commonly exploited species.

Third, the obligation to "promote optimum utilization" is "without prejudice to Article 61". This qualification means that the coastal State's authority under Article 61 is not affected by any obligation regarding "optimum utilization". Article 61 authority principally includes (1) determination of the allowable catch, (2) establishing measures to ensure against endangering EEZ resources by exploitation, (3) establishing permissible yields, in light of the maximum sustainable yield as qualified by environmental and economic factors and taking into consideration effects on associated and dependent species. None of these determinations and choices need be affected by any obligation to observe or maintain a particular level of utilization above zero from a particular fishery. In light of Article 62(1), Article 61 authority could be exercised to set an allowable catch or a permissible yield at whatever level the coastal State determines to be in the interests of its harvesting effort or whatever other lawful interest it seeks to enhance. Apart from the obligation to avoid endangering target species or threatening reproduction of associated/dependent species, the only legal exception to this Article 61 authority is the Article 64 obligation to "cooperate" concerning specified highly migratory species. Such obligation should be interpreted as requiring negotiations that actively take into account interests of other fishing and coastal States and respond thereto.

This conclusion that "optimum utilization" is to be decided solely by the coastal State is reinforced by the provisions on dispute settlement in CLOS Part XV. Article 297(3)(a) excepts from compulsory and binding dispute settlement under section 2 of Part XV any dispute arising from those coastal State sovereign rights and discretionary powers that together determine how much the coastal State's EEZ fish can be taken, by whom, when, and on what other conditions. It is certain under CLOS that the specific meaning of optimum utilization in any specific context is a matter exclusively for coastal State decision.

7. Harvesting capacity and surplus

In addition to the sovereign and non-reviewable (under treaty dispute settlement procedures) right under Articles 56 and 61 to fix the allowable catch, the coastal State is expressly authorized by Article 62(2) to determine its own harvesting capacity in relation to the living resources of its EEZ. These two decisions, which are at the discretion of the coastal State, determine whether or not there is a surplus: Article 62(2) declares that "where the coastal State does not have the capacity to harvest the entire allowable catch, it shall ... give other States access to the surplus of the allowable catch...". The injunction that the coastal State give access to the surplus is thus seen to be considerably less forceful than might appear from Article 62 alone. The coastal State's obligation to give access is

dependent on the vital pre-condition that it determine that its harvesting capacity is exceeded by the allowable catch. Since these determinations are wholly within the coastal State's discretionary powers, it is apparent that giving access is not meaningfully an obligation of the coastal State. If the coastal State decides that declaration of a surplus meets its interests, only then is it required to give access under terms and conditions it prescribes.

It is now well recognized that a coastal State may have sound reasons for affirmatively deciding that its interests are best served by determining that the allowable catch is equal to or less than its harvesting capacity, thus also deciding not to allow any foreign fishing. In another paper for this meeting John Gulland sets out considerations that could influence the coastal State in this direction.

The treaty makes clear that the coastal State cannot be compelled to allow foreign access even if it fails to determine an allowable catch and its harvesting capacity. Apparently the treaty framers considered that coastal discretion included refusal to make a choice of allowable catch and of harvesting capacity. Article 297 not only excludes any obligation by a coastal State to submit to compulsory and binding dispute settlement over a dispute about its sovereign rights over fisheries or their exercise (as discussed further in a later section) but also expressly excludes any binding and compulsory procedure if the coastal State denies access by simply refusing to do anything. In such a case, where the refusal to act is "arbitrary", the coastal State can, however, be pursued through "compulsory conciliation". This procedure is compulsory in the sense that the coastal State is at least required to pay part of the fees and expenses of the conciliation proceedings and it cannot preclude their completion by not participating. However the conciliation commission is authorized only to make non-binding recommendations to the parties and these can simply be rejected by the coastal State if it chooses to notice them even to this extent.

It is true that Article 300 declares that States shall exercise the "rights, jurisdiction and freedoms recognized in this Convention in a manner which would not consitute an abuse of right" and this might appear to limit coastal State choice. Perhaps such an argument would prevail if there were a way to present it before an impartial tribunal. But article 297 appears largely to preclude this possibility, as well, perhaps, as establishing that even the coastal State's refusal to act to set an allowable catch is not an "abuse of right" under the treaty. By excepting such non-action from binding dispute settlement the treaty appears to provide that it is not necessarily an abuse of discretion and if that is the case it would seem difficult to contend that it is necessarily an "abuse of right".

On the other hand, if a fishing State has the influence to secure outside review, by agreement or otherwise independent of the LOS treaty, then Article 300 might provide a legal basis for attacking arbitrary actions by a coastal State.

The short of the matter is that the treaty contains virtually no restriction on coastal State authority to forbid access to foreign fishing. For practical legal purposes the treaty provides no remedy even for some arbitrary actions to deny foreign access.

Emphasis on the supremacy and discretion accorded to coastal States under Articles 61 and 62 of CLOS should not obscure the probability that coastal States will exercise that authority and discretion to find a surplus of fish in its EEZ. Furthermore, some States may have legislation according to which the allowable catch must be determined in accordance with biological information and it may well then happen that the AC will exceed domestic harvesting capacity. Although such legislation is not compelled by CLOS, it is consistent with it and may result in the determination of a surplus as defined by the treaty. For whatever reason the coastal State establishes a surplus, to do so brings with it the obligation to give access to it. This in turn entails the need to determine the terms and conditions of access and to make allocation amongst foreign fishermen. The latter course, in turn, may involve consideration of whether a particular State should be given access in view of its geographical situation or previous pattern of fishing or research. These matters are discussed after consideration of the terms and conditions of access.

8. Article 62 - Terms and conditions of foreign access

The Convention requires that if a coastal State has a "surplus" of living resources in its EEZ it shall give access to other States. Such access shall be effected through "agreements or other arrangements and pursuant to the terms and conditions referred to in paragraph 4" of the same article. The latter paragraph states that nationals of the other fishing States "shall comply with the

conservation measures and with the other terms and conditions established in the laws and regulations of the coastal State". The nature of the terms and conditions is solely the decision of the coastal State, the only specific restraint being that coastal laws and regulations containing the conditions "shall be consistent with this Convention ...". The range of terms and conditions is not, however, limited by the treaty. The list contained in Article 62 is illustrative only and not exhaustive.

The coastal State laws and regulations may relate to the 11 categories of measures listed in 62(4) and, apparently, to other matters as well so long as the laws and regulations comply with the other provisions of the treaty. Such coastal laws and regulations regarding fisheries could relate to the coastal State's "other national interests" which the coastal State is entitled under paragraph 3 to take into account in giving access. Thus, if the coastal State's fisheries are considered significant for the national interest because they are a useful means of achieving specific political goals, the coastal State's laws and regulations regarding fisheries access could give effect to that interest. If the political goals were promoted by certain specific conditions affecting foreign access, those conditions could be implemented in the coastal laws and regulations.

Under CLOS the coastal State decision on terms and conditions of access is discretionary, but this discretion is guided by the treaty requirement that coastal laws and regulations containing the terms and conditions must be consistent with the treaty. Article 300 provides the further requirement that State Parties must fulfill their treaty obligations in good faith and exercise their rights "in a manner which would not constitute an abuse of right". To comply with these directives, a coastal State cannot both allocate a surplus and establish regulations that effectively preclude harvesting it. Once a surplus is declared and an allocation made to foreign fishermen the coastal State is obliged to exercise its regulatory authority in good faith and consistently with the other substantive provisions of the treaty. Invidious regulations imposing extravagant and unrealistic conditions that in practice forbid fishing would not be consistent with the treaty. An example of this might be the use of closed areas in such a way that the foreign fleet must risk and probably incur costly damage to fixed gear from an ice pack or force placement of gear in a shipping lane. Another example might be the use of "windows" or seasons for permissible fishing which made it unusually costly for foreign fleets to operate 1/.

While it might seem unrealistic to consider imposing unreasonable conditions when the foreign fishery might have been totally prohibited simply by not declaring a surplus, the division of authority and political influence within a particular State may be such that this tactic is feasible and, in some quarters, considered desirable. The LOS treaty would not permit these tactics.

The list of terms and conditions in Article 62 includes those that would be expected in fishing laws and regulations, including licenses, fees, catch quotas, seasons closed areas, vessel and gear types, size and age and species of fish, required information and research, place of landings, observers, training, technology, transfer, joint ventures, and enforcement. This provides an enormous range of detail in terms and conditions that the coastal State is authorized to impose.

The special importance of some of these matters should not be lost in this maze of detail. Article 62(a) specifically refers to licensing and the payment of fees, making it clear that the coastal State is authorized to require payment for giving access to the surplus. The treaty contains no specific limitation or restriction on fee level, and although reasonableness is required the treaty gives ample leeway to coastal States to secure monetary benefits from EEZ fisheries. Charging fees that reflect the actual value of the right to the foreign nation involved would certainly fall well within coastal authority. Although the treaty refers to the "licensing of fishermen, fishing vessels and equipment, including the payment of fees and other forms of remuneration" it does not follow that the total value charged for access must be derived simply from a calculation based on a per-vessel or per-fisherman basis. Rather, charges may be based on the overall value of the right to fish irrespective of the fishing strategy and tactics employed by the distant water State. This means, however, that the payment of any individual vessel might be very large in relation to its own share of the harvest. Such consideration is not a legal barrier to determination of fees by the coastal State. Of course coastal State is not in any case obliged to collect its compensation for access rights solely by charging individual vessels or fishermen.

1/ The general point must immediately be made here that the coastal State's laws and regulations that allegedly violate Article 300 or are allegedly inconsistent with other treaty provisions cannot be challenged in compulsory dispute proceedings under Part XV of this treaty if the coastal State does not consent.

Article 62(a) indicates that payments for fishing rights may take various forms which "in the case of developing coastal States, may consist of adequate compensation in the field of financing, equipment and technology relating to the fishing industry". While this language mentions only developing coastal States, it is doubtful if it should be construed to limit payment of these forms only to such States. Even developed coastal States may have large segments of their coastal area and population in need of these assets and may wish to accept payments in these forms from distant-water nations. So long as one form of compensation is equivalent to another, it seems immaterial what form is used.

One of the problems arising from the multiple conditions of access specified in Article 62 is determining the value to be placed on them. Thus a coastal State requirement for fishery research as a condition of access is a significant cost to the State seeking access and needs to be given a value in calculations of the total payments to the coastal State. Similarly, special enforcement procedures that may be required of foreign vessels may be a cost item that will enter into negotiations over access conditions.

9. Constraints affecting choice of who gets access

Article 62 contains two specific provisions relating to the coastal decision about which States will be given access to coastal fisheries. Paragraph 2 provides for the basic obligation, such as it is, to give access and especially singles out the landlocked and geographically disadvantaged States by referring to them with the phrase "having particular regard". The following paragraph (3) enjoins the coastal State to "take into account all relevant factors" and then emphasizes four different States or categories of States: (1) the coastal State itself; (2) landlocked (Article 69) and geographically disadvantaged States (Article 70); (3) developing States in the region or subregion; and (4) States who have habitually fished in the zone or which have made substantial efforts in research and identification of stocks.

The discussions to follow examines the treaty in relation to the latter three categories of States, considering the coastal States authority over access by each category and the rights of States in each category.

(a) Landlocked (Article 69) and geographically disadvantaged States (Article 70)

Articles 69 and 70 deserve careful analysis because they were particularly controversial in the LOS bargaining, with the result that they were the product of special negotiations aimed at satisfying landlocked, geographically disadvantaged, and coastal States (hereinafter the former two groups of States are referred to as LLGDS). In the final outcome the provisions of Articles 69 and 70 do not significantly condition or modify the coastal State's complete control over its EEZ fisheries. The LLGDS, according to Ambassador Nandan, head of Negotiating Group 4 which dealt with this "core issue", stated that they believed "their participation in the neighbouring exclusive economic zones should be on a preferential or priority basis" and that Articles 69 and 70 should "expressly include a reference to priority or preference in order to make those articles more meaningful".

This position was unacceptable to coastal States and no such reference is made. Ambassador Nandan nonetheless said he was "convinced there is a need for some clarification of the relationship between the provisions of Articles 69 and 70 and those of Article 62". His compromise was to amend Article 62 to add at the end of paragraph 2 the words "having particular regard to the provisions of Articles 69 and 70, especially in relation to the developing States mentioned therein". This was done.

Neither this amendment, nor the addition of paragraphs 3 and 4 to Articles 69 and 70, respectively, places any constraint on the coastal State's decision to give or not to give access to foreign States in general, including LLGDS. The reason for this is that the declaration that LLGDS have a "right to participate" in Articles 69 and 70 refers only to the "surplus" and "an appropriate part of the surplus". Whether there is a surplus in the first place remains within the full control of the coastal State, which is specifically confirmed by the qualification that the "right to participate" is "in conformity" also with Articles 61 and 62. This express qualification establishes that the "right" of Articles 69 and 70 is subject to the discretionary powers of the coastal State set out in Articles 61 and 62. The right is thus contingent upon the coastal State's decision regarding the allowable catch, its determination of the indigenous harvesting capacity, and the terms and conditions the coastal State chooses to apply to its EEZ fisheries.

Although Articles 69 and 70 have no impact on the substance of Articles 61 and 62, they do declare the "right" of the LLGDS to fish for a part of the surplus, if one is established. But despite the multiple references in Article 62 to Articles 69 and 70, even the right to fish part of the surplus is tenuous. Article 62(2) states that the coastal State is to give access through "agreements or other arrangements and pursuant to the terms, conditions, laws and regulations" it may establish. While in giving access the coastal State is to have "particular regard" for LLDGS (paragraph 2), the next paragraph - which is the major paragraph concerning what States might get access - expressly provides that the relevant factors to be taken into account by the coastal State in giving access are not exhaustively listed in the Article. The reference to Articles 69 and 70 is only one of the factors the coastal State must take into account among an open-ended list it might also consider in choosing its course. The additional reference to LLDGS in paragraph 2 certainly emphasizes their importance for choosing who gets access, but it does not succeed in completely removing a coastal State right to give access to others. That right is only slightly qualified by Article 62 in combination with Articles 69 and 70.

The one modest constraint that is, arguably, placed on the coastal State's right to give access to its surplus entirely as it pleases derives from paragraph 3 of Article 69 and paragraph 4 of Article 70. (These are identical in substance and hereafter both are meant by references to 69(3).) Article 69(3) assumes that the coastal State has declared a surplus and that foreign fishing is being allowed, but that the coastal State is building up its capacity to take the AC. If this buildup is of wholly indigenous capacity, then (Ambassador Nandan suggests) LLGDS have no strong basis for arguing for their own participation and Article 69 is inapplicable. Presumably this is because there is no "surplus" over the coastal State's own indigenous harvesting effort and all foreign participation is being foreclosed. On the other hand, if the buildup of domestic capacity is occurring through joint ventures, then Article 69(3) makes provision for conditional continued access by an LLGDS.

The term "conditional continued access" should be emphasized. According to Ambassador Nandan's report, in Article 69(3) "emphasis is put on the developing landlocked and geographically disadvantaged States which have actually been fishing in the particular exclusive economic zone at the time when the situation arises". If this statement is given weight in interpretation, Article 69(3) excludes any new claims to entry by developing LLGDS to fisheries in adjoining EEZs when the coastal State's capacity is increasing to the point that through joint ventures it is capable of taking the entire allowable catch. (And it must be remembered that the latter can be adjusted to suit the coastal State's social interests and is not dictated by biological considerations.)

Despite the mandatory tone of the language in 69(3), the provision for continued LLGDS participation in this situation leaves a good deal to be desired in terms of certainty and assured access. The coastal and other concerned States "shall cooperate" to establish "equitable arrangements" to allow for LLGDS participation "as may be appropriate in the circumstances and on terms and conditions satisfactory to all parties". This language is very loose in the protection it offers for the landlocked or geographically disadvantaged State that has an investment in, at least, vessels and gear, and also perhaps in processing, storage, distribution, and marketing facilities that it seeks to protect by having access to an assured supply of a particular resource. Provision for continued participation "as may be appropriate in the circumstance" gives a very wide range of appreciation within which to make arrangements. Because the larger the number of fishing entities in the face of a declining surplus, the smaller the share of each, it might be expected that the "appropriate" share would be relatively small and subject to further reduction, especially if the LLGDS is one of several other fishing States. The problem could be made much more difficult if the LLGDS has need for fish of a particular species, size, or condition or for fishing at a particular place or time.

While it is fair to say to say that Articles 69 and 70 provide legal support for seeking access when the coastal State is willing to establish a "surplus", it is also fair to say that the conditions for achieving that access in fact could impose insuperable obstacles. The right to participate in exploiting a part of the surplus must be in conformity with Articles 61 and 62, the latter providing that the coastal State may establish the terms, conditions, laws and regulations governing access. Accordingly it appears that actual access depends upon LLGDS capacity to meet the coastal State's terms and conditions. These may be extremely difficult or even impossible to satisfy, especially if the coastal State establishes fees determined on a competitive basis.

Further, Article 69(2) also provides that the States concerned are to establish the "terms and modalities of participation" through agreement. In seeking this agreement Article 69(2) sets out an open-ended list of factors they are to take into account, the first factor being "the need to avoid effects detrimental to fishing communities or fishing industries of the coastal State". The same factors are to be taken into account in implementing Article 69(3), where through joint ventures the coastal State is increasing its capacity to harvest the allowable catch. Accordingly, whether a particular LLGDS can secure access depends on whether it can negotiate appropriate arrangements with the coastal State and others, having in mind the conditions of coastal State fishing communities and industries, the extent of fishing elsewhere by the particular LLGDS, the extent to which other LLGDS fish in the coastal State's EEZ, and the nutritional needs of the States concerned.

In sum, articles 69 and 70 do not provide for an effective rights of access to an adjoining State's EEZ fishery, but if that State declares a surplus, Articles 69 and 70 give the LLGDS a claim to secure access to it. Realizing the opportunity presented by such a claim faces the pitfalls and difficulties of negotiations to reach bilateral, subregional, and regional agreement on terms satisfactory to the coastal State and to others.

(b) Developing States in the region or sub-region

The Article 62 reference to developing States in the subregion or region is the third item in the non-exhaustive list of relevant factors for the coastal State "to take into account" in giving access to other States to its EEZ. If, as just noted, landlocked and geographically disadvantaged States effectively possess only right to negotiate for access on terms satisfactory to the coastal State as well, then other developing States in the region have even less legal claim to consideration. It must be said, however, that those and other developing States might still be able to negotiate access, in preference to the Article 69 and 70 States, if they are agreeable to better terms, i.e., terms that the coastal State will accept as satisfactory. It must be remembered, in this connection, that the coastal State has complete discretion to set the terms and conditions for access to its EEZ. Thus, it is solely up to the coastal State under Articles 62, 69, and 70, to choose which State or States are given access.

(c) Economic dislocation

The fourth, and last, "relevant factor" mentioned in Article 62 is "the need to minimize economic dislocation in States whose nationals have habitually fished in the zone or which have made substantial efforts in research and identification of stocks". This factor could embrace two different categories of States: fishing States and those who have "made substantial efforts in research and identification of stocks". In either case, however, the legal consideration is the same: these States are the last mentioned in a non-exhaustive listing of States to consider in giving access. This order of arrangement contrasts sharply, and intentionally it is believed, with the proposal made by the United States which specifically provided for access to be given on the basis of certain priorities, first of which was States that have traditionally fished a resource. Thus, if the Article 62 order of enumeration is given legal weight the factor of economic dislocation in habitual fishing States and researching States should have the least among those mentioned. But again, as noted already in this discussion, the coastal State's choice of fishing States to be given access is ultimately dependent on the terms and conditions it finds acceptable and this may mean that a State in this fourth category of States is given preference. If any "order of priority" is suggested by the order of listing in Article 62 it appears vitiated by the discretionary authority on the coastal State to set terms and conditions that are satisfactory to it.

In this connection a good deal has been made in some quarters of the Article 62 reference to economic dislocation that, it is alleged, would obligate the coastal State to allocate portions of a surplus to States who show such dislocation. Such an argument has no merit whatsoever even though it can be conceded that the activities of certain fishermen meet the criteria of habitual fishing in an EEZ. Even if no developing, landlocked, or geographically disadvantaged States sought access to the exclusive fisheries zone, there would be no obligation under CLOS to accord access to any particular State.

Under the LOS treaty the coastal State alone determines the conditions of access (subject to Article 64 for tuna and other Annex I species discussed below) and this means that only those States get access who satisfy these conditions. This being the case it is obvious that no one State can demand to be given access as a matter of right. This is plainest if it is hypothesized that the coastal State

decides to allocate all of its surplus resources by auction to the highest bidder. If all the States who bid are States who have habitually fished in the zone, but there is only one highest bid, then all but one of these States will be denied access. This is perfectly lawful under a treaty that gives the coast State discretion to determine acceptable terms and conditions of access. Certainly a decision to maximize revenue from a surplus resource is a reasonable one and could not successfully be attacked as an abuse of right or otherwise as an objectionable abuse of discretion.

Indeed it may be difficult to imagine practical choices regarding access which, if unrelated to politics, could be considered unreasonable. Article 62 expressly recognizes that in giving access the coastal State can take into account the significance of the EEZ living resources to its "economy" but also to its "other national interests". This might embrace all conceivable interests that might in varying degrees bear on fisheries including political, military, educational, ecological, cultural, religious, or ideological. Any doubt that fisheries significantly relate to such a diversity of interests can be dispelled by documenting that in practice States already employ their controls over fisheries to secure such objectives. In face of the treaty's broad terminology, it would be difficult to demonstrate or to persuade that the coastal State's authority over access can no longer be exercised to promote those interests. In any event, consistently with the treaty a wide range of considerations could be adduced by the coastal State to justify its choice of the State or States to be allowed access to fish in the EEZ.

D. Shared stocks

The creation of the 200 nautical mile exclusive economic zone by the Third U.N. LOS Conference is frequently hailed as the principal accomplishment of that venture in international law-making. One of the major reasons often given for such an appraisal is that, because virtually all living resources are harvested within 200 miles of a coast, the EEZ provides the opportunity for an improvement in decisions about fishery conservation and management. The EEZ places fisheries within a coastal State's jurisdiction and, hence, subject to a single management system.

Unfortunately, the opportunity detected by observers is less than complete because many exploited fish stocks "possibly even the majority of the stocks supporting large-scale industrial fisheries" according to John Gulland (1980) are "shared migratory stocks", i.e., those that are at some stage subject to the jurisdiction of more than one State because of a regular pattern of movement across a boundary. Frequently this means that the States concerned cannot achieve either conservation or allocation goals by action independent of the other. This means, in turn, that despite its exclusive legal authority the coastal State cannot wholly shape the conditions of access to stocks in its EEZ. Of course this dilemma does not always pertain. Shared stocks include a great many situations that exhibit different elements and present different problems.

This situation is dealt with in Article 63(1) of CLOS "where the same stock or stocks of associated species occur within the exclusive economic zones of two or more coastal States ...". The conduct prescribed for the States concerned is that they "shall seek to ... agree upon the measures necessary to coordinate and ensure the conservation and development of such stocks without prejudice to the other provisions of this Part". In order for either coastal State to promulgate improved management measures in many situations, it must seek to agree with the other coastal State or States upon one or more of a variety of actions regarding the target stocks. In addition these States are enjoined to seek agreement regarding "associated stocks", which can be stocks that neither State is interested in exploiting.

Both (or all) States in this situation retain the exclusive authority conferred by Articles 56, 61 and 62, but that authority may often be inadequate or insufficient to accomplish management objectives. Thus while the creation of the EEZ may still represent an improved opportunity for management, it is apparent that this opportunity will still require international cooperation and agreement in a great many situations around the globe. Some "improvement" is made, if less than might seem, because instead of seeking to manage fisheries open to free access by anyone, the new regime permits the coastal States of the zones in question to restrict access to, and regulate, their own fishermen. What is changed, therefore, is the scale not the nature of the problem. Instead of dealing with free entry by anyone in the world, the coastal State with shared EEZ stocks need only deal with each other.

However, Article 63 leaves a good deal to be desired in terms either of identifying the States who are obliged to seek agreement on conservation and development or of identifying the overall problems of shared stocks. Article 63 should have been drafted in order to take account of all significant instances in which a management problem arises because a single coastal State cannot by itself prescribe measures for a stock that is also located within another State's jurisdiction. It is not entirely clear that Article 63(1) achieves that objective.

The problem is whether 63(1) refers only to instances in which target stocks or stocks of associated species appear in two or more zones. On the surface, at least, it does not appear to require both to appear in both (or all) the zones involved. The unresolved questions are: does the Article 63 (1) obligation apply if an associated species appears only in State B's zone while the target (exploited) stock appears in A & B. Or is it applicable to State C within whose EEZ one of the associated species also appears, but no target stocks. Or is it applicable if the target stock appears in State A but associated species also appear in both State A and B.

Despite the literal language of Article 63(1) it ought to be interpreted to apply whenever either situation occurs, i.e., (1) the target stock is harvested in A and B and an associated stock in one or the other; (2) the target stock is harvested in A or B and an associated stock is in A and B. This would mean that the Article 63 obligation applies where either target or associated stock appears in only one zone while the other appears in two or more. Such an interpretation would include the instance of the third State whose zone lacks any of the target species.

The substantive obligation imposed by Article 63(1) cannot fairly be described as awesome, imposing, or, even, perhaps, very consequential. First, the obligation is not to establish joint measures or to concert conservation actions or to coordinate research but only "to seek to agree" on such actions. So long as a coastal State makes a reasonable effort to identify problems that require agreement with another coastal State and to reach an agreement it will have met the obligation in Article 63(1). The first of these burdens is not necessarily easy to discharge because it assumes knowledge of target and associated stocks that may be difficult to come by, but it is doubtful that default of the responsibility to act can be imputed unless it could be shown that the relevant officials made no effort to use available information about the stocks involved or to exercise the capability they possessed to develop further information that would provide a basis for identifying a problem.

Second, once the appropriate coastal States are identified, any of them need only make a good faith effort to reach agreement upon the "measures necessary to co-ordinate and ensure the conservation and development of such stocks". Failure to agree is not necessarily a failure to observe the Article 63 obligation. The precise subjects of an agreement appear to be irrelevant in this connection - they obviously will vary depending on the precise difficulties involved in particular contexts and on the relative advantages and disadvantages for the States concerned.

Third, Article 63 is somewhat unusual among the CLOS articles on fisheries in the EEZ because it specifically mentions stocks, rather than simply "living resources" or "species". The obligation to seek agreement arises, therefore, only when the same stock (target or of associated species) is in both EEZ, not when the same species is involved. It is conceivable that two States might share a species but that the stocks of this species do not cross the EEZ boundary and are unaffected by fishing for the separate stock. Accordingly, the situation would not be one recognized in Article 63(1) and the States concerned would have no obligtion vis-a-vis each other (Gulland, 1980).

E. Stock within Coastal State Authority and within the high seas

Three situations under CLOS deal with this form of shared stocks. One concerns the highly migratory species that are found within and beyond the EEZ. Another relates to anadromous species that move from national jurisdiction to areas beyond and vice versa. The third refers to coastal stocks (target stocks that are not subject to Article 64 and associated stocks) which occur within the EEZ and on the high seas, being distributed or moving across the EEZ boundary with the high seas. The following examines each of these situations.

1. Highly migratory species

CLOS Article 64 and Annex I identify and specify certain living marine resources as highly migratory species that are treated somewhat differently than others found within the EEZ. The term "highly migratory species" is not defined in Article 64 or elsewhere but its reference is supplied by the listing in Annex I. Various species of tuna are the resources of most commercial importance listed in the Annex. Others include highly prized recreational fish especially the marlins, sailfish and swordfish.

Highly migratory species (HMS) (as labelled and defined in CLOS) are subject to coastal authority in the EEZ exactly as are all other species except in the respect that coastal States are, in addition, obliged by Article 64 to cooperate with States fishing in the region "with a view to ensuring conservation and promoting the objective of optimum utilization of such species throughout the region, both within and beyond the exclusive economic zone". Such species are often accessible for harvesting both within one or more EEZ and beyond. Amounts taken within may affect catches beyond and vice versa; potential effects differ in particular contexts, depending sometimes on the extent of the area of high seas outside fishing zones.

The other side of this picture concerns the rights and duties of fishing States. According to Article 64 such States are obliged to cooperate with coastal States for HMS fishing within the zone and in the region beyond. Such States, then, are not free to adopt conservation and allocation measures applicable only on the high seas without efforts to cooperate for this purpose with coastal States. Fishing in the region by either coastal or distant water States prior to cooperative actions aimed at regulations for a new season would appear to be inconsistent with Article 64, since this could prejudice ultimate conservation and allocation measures, both inside and outside the zone, at least for that season and perhaps longer.

Within the EEZ the coastal State is entitled to establish an allowable catch for a HMS species so long as this is done in accordance with Article 64 obligations. Such obligations include cooperation with other coastal and fishing States of the region with respect to conservation and utilization. Cooperation, in turn, reasonably means negotiations with the other States to establish conservation measures and to allocate catch. The negotiations must deal with HMS within the zone as well as outside, because the obligation extends to HMS in the region.

The most significant question arising from these provisions has to do with the situation arising when the coastal and distant fishing States are unable to agree on a regime. In such an event CLOS appears to place authority in the hands of the coastal State, at least as regards HMS within the EEZ. This means in turn that where HMS occur in the zones of more than one coastal State it will be necessary for the coastal States (at least) to cooperate to achieve effective conservation and management.

For HMS that can also be fished outside a particular EEZ the Convention can be interpreted in various ways to permit effective management by all of the coastal States of the region. Article 116 provides that the right to fish on the high seas is subject to coastal State rights, duties and interests under Article 64. While the specific effect of this language is not elaborated in the treaty, it might reasonably be construed to mean that, in the event cooperation breaks down or fails, high seas fishing for HMS can only be conducted in accordance with coastal States' determination of the TAC for the region as a whole and their capacity to harvest that TAC within their EEZ.

So far as concerns access to HMS within a specific EEZ, the most significant point to note is that this cannot be considered separate from access to HMS in the region beyond that EEZ. The fishery must be considered as a whole and management decisions must take account of the availability of stocks wherever they may be fished, including areas outside that particular EEZ. Whether any coastal State likes it or not, it will be constrained in determining access to HMS within its EEZ by fishing activities and regulatory measures occurring outside its EEZ, both in another State's EEZ and on the high seas. While any coastal State has exclusive authority to conserve and to allocate HMS found within its zone, this authority cannot suffice by itself to produce desired results unless this State cooperates with other States in whose EEZ the same stock is available. None of these States, in turn, can establish an effective management regime if consequential catches of these stocks can be taken on the high seas beyond their control. Even if the LOS treaty can be interpreted to avoid the latter possibility, the ultimate constraint on their capacity to control access is their willingness and ability to cooperate with each other. It is possible to interpret CLOS to make coastal State rights paramount

over high seas fishing rights, but the treaty does not authorize coastal State enforcement on the high seas and this practically negates coastal dominance except where fishing cannot be conducted economically on the high seas without also fishing within EEZs.

2. Anadromous species

Conditions of access for foreign fishing for anadromous stocks are probably of little significance when compared with other stocks. The reason is that the most valuable anadromous species, salmon, is unlikely to be available at all to foreign fishing in an EEZ. Few coastal States lack capacity to take all available salmon and none want to allow foreign fishing in excess of the TAC. Furthermore the treaty provides that fisheries for anadromous stocks are to be conducted only landward of the EEZ limit except where "this would result in economic dislocation for a State other than the state of origin". Accordingly questions about access beyond the EEZ will be significant only for States who have traditionally fished beyond 200 n. miles. This issue is not dealt with here because the relevant problem is limited to access to fisheries within the EEZ.

Article 63(1) appears literally to be applicable to anadromous stocks which transit the EEZ but should be interpreted to refer only to stocks not covered by other articles on specific species. Thus Article 66 contains the only provisions applicable to anadromous species. In this situation the State of origin of such fish has "primary interest in and responsibility for such stocks" (Article 66(1)). This means, according to Article 66(2), that the state of origin is entitled to establish the total allowable catch for such stocks after consulting with the adjacent State (or the sharing coastal State if it is not adjacent) and with States who are permitted under the treaty to fish on the high seas (para 2). Thus, in contrast to other shared stocks, anadromous stocks are not subject to the authority of both (or all) sharing States to determine the allowable catch. It seems to be a reasonable interpretation that any fishing State is obliged to recognize the TAC so established.

Interestingly, however, the other coastal fishing State is apparently authorized under Article 66 to establish its own regulations in its EEZ, although it is also enjoined to cooperate with the State of origin in conservation and management of these stocks. This is a reasonable conclusion from Article 66, paras. 2-4. Paragraph 2 states that the State of origin's regulatory measures apply "in all waters landward of the outer limits of its exclusive economic zone and for fishing provided for in paragraph 3(b)", which refers to high seas fishing. On the other hand, paragraph 3(a) limits anadromous fishing to "waters landward of the outer limits of exclusive economic zones" (except for certain fishing beyond) and this plural reference to "zones" obviously envisages fishing in an EEZ other than that of the State of origin. So the host State's regulatory authority set out in paragraph 2 is not co-extensive with the para. 3 provisions for fishing on its anadromous stocks. That authority extends to high seas fishing but not to other EEZ fishing.

The coastal fishing State is supposed to cooperate with the State of origin and because the latter is entitled to set the TAC it would appear that the former must accommodate to the latter's lead in this respect. Still, within this confine, these States clearly are supposed to negotiate further arrangements, either directly or through regional organizations. In sum, the State of origin has primary authority over anadromous stocks and while any other coastal fishing State may have some interest in the same stock it is not wholly free to control such stocks in its zone and its control over access conditions is not unfettered.

3. Coastal species within the EEZ and in the adjacent high seas

The third instance of zone/high seas stocks (either target or associated) are those that are not highly migratory and occur both within the zone and in an area beyond and adjacent to the zone. Under Article 63(2) coastal States have full control over these stocks in the EEZ in exactly the same way as over any other stock within the EEZ. In contrast to highly migratory species in the EEZ the coastal State has no additional obligation of cooperation or of seeking agreement concerning the stock in the EEZ by itself and it has no additional obligation regarding utilization of this stock as a whole, i.e., in and beyond the EEZ.

However the coastal State and States fishing for such stocks are obliged to "seek...to agree upon the measures necessary for the conservation of these stocks in the adjacent area". (The adjacency criterion here also differes from the HMS situation where no similar qualification applies). The contrast mentioned above, between the coastal State's obligation regarding conservation of these

stocks and HMS, is probably much less than appears. It is doubtful if a coastal State could expect to take effective conservation measures if they were applicable only within the EEZ while unrestricted fishing were permitted on the same stock in an area outside the EEZ. Hence it is likely that if the coastal State seeks effective conservation it will have to concert its zonal measures with those agreed to by other States for application on the high seas beyond the zone.

Insofar as utilization and conditions of access are concerned there appears to be no difference between these so-called "straddling stocks" and any stock found only within or wholly within a single EEZ. The coastal State has exclusive authority to establish the allowable catch, determine permissible catch, determine harvesting capacity, and set the terms and conditions for access to any surplus it might establish, irrespective of utilization beyond the zone.

It should be noted, however, that the actual conditions of access, within the EEZ might be affected by fishing for these stocks beyond the EEZ. If such fishing were allowed to reduce abundance of the same stock within the EEZ this might well have an effect on the above determinations.

The relationship between Article 63(2) and Article 116 may be important in this connection. As noted earlier, the latter article declares that the right to fish on the high seas is subject to the rights, duties and interest of coastal States as provided for in Article 63(2) and other articles. Unfortunately the treaty fails to clarify or to elaborate on this relationship, hence we have no guidance on what this qualification means. We know that no such restriction on high seas fishing rights pertained under customary law and that the treaty should be interpreted to give effect to all of its provisions. The question is what effect in this instance?

In the first instance this question is unimportant if the coastal and fishing States are able to agree on necessary conservation measures in the adjacent area. As noted in other discussions, however, national interests in fishing and resulting differences in fishing patterns, gear, technique and practices, may make it difficult to agree in these measures. Fortunately, so far as is known at the present time, this particular problem of zone/high seas stocks is not as common as the stocks shared between EEZs.

It must also be emphasized that Article 63 obliges the States concerned to seek to agree. If States seek and fail to agree, after both or all have made good faith efforts to do so, what may be done?

Again, as with highly migratory species, the balance in CLOS appears to be on the side of the coastal State. Article 116 subjects the right to fish to Article 63(2) and other articles establishing coastal State rights, duties and interests. It is plain that the coastal State has extensive rights over the EEZ portion of the stock and is legally competent to decide upon any necessary conservation measures as well as upon the extent and conditions of foreign access to the stock in the zone. If fishing on the high seas is subject to the coastal State's right to establish conservation measures in the EEZ, this would appear to mean that others must recognize these measures as applicable wherever the stock in question is found on the high seas. If the fishing State is not thus obliged to recognize and to observe coastal State measures, the prospect is that they would be made ineffective for the stock as a whole. Whether or not failure to observe those measures on the high seas would have such an effect would depend on the extent, timing and methods of such fishing. If significant high seas harvesting occurs the probability is that coastal measures would fail. Such an outcome seems to be inconsistent with Articles 116, 63(2) and other EEZ fisheries provisions.

The coastal State's restrictive measures are limited by Article 63(2) to conservation - utilization in the high seas remains beyond coastal authority. Of course if the TAC for a stock in the EEZ takes into account the entire stock, and not just the EEZ portion, as might arguably appear to be its right, and the coastal State estimates its capacity is to harvest 100% of that within the EEZ there would appear to be nothing left for foreign fishing in the adjacent area. On the other hand if the TAC exceeds domestic narvesting capacity within the EEZ it would appear that foreign fishing outside that area must be left free to take the excess, subject to observance of conservation regulations. If this interpretation of Article 63(2) and 116 were valid, it might mean that the coastal State would be unable to benefit from EEZ fishing if the surplus could be taken in the EEZ but were also available in the adjacent high seas. That surplus could then instead be harvested by foreigners free of charge in the high seas.

Of course it might be that because of migration patterns the stock available on the high seas is greatly reduced in abundance by earlier domestic fishing in the zone. It might therefore be uneconomical or less productive to wait to fish for this stock in the high seas. In that case the coastal State might still establish terms and conditions for access to the stock within the EEZ. But because of the availability of the stock on the high seas there may be a ceiling on the coastal State's options in setting terms for foreign access.

The reverse of the above may sometimes occur, i.e., the more profitable fishing is on the high seas and reduced abundance is experienced later in the EEZ. So long as the high seas fishing States observe prescribed conservation measures, the coastal State would have no lawful way to alter the situation. It may be recalled in this connection that conservation measures applicable on the high seas cannot discriminate in form or in fact against the fishermen of any State. Accordingly the coastal State cannot lawfully prescribe discriminatory conservation measures applicable on the high seas in order to benefit its own fishermen within the EEZ.

The above observations are obviously speculative. Other interpretations might be devised to give effect both to the EEZ fisheries articles and those applicable to high ses fishing beyond. However, whatever interpretation is employed should make it possible to create an effective conservation regime. Unless this is the standard, the duty imposed on all States to conserve living resources on the high seas and within the EEZ may be unattainable. Adopting this standard almost necessarily weights interpretation toward coastal State authority in a situation where only very small harvests are taken outside the 200 mile EEZ. The small size of the annual catch of coastal species (not HMS) beyond 200 miles suggests that there can be little hazard to the general interest by recognizing that the coastal State in this situation has predominant authority to adopt conservation measures in the case of failure to agree on them among the States concerned. The condition that such measures cannot discriminate should make this approach both reasonable and acceptable.

Coastal State demands for observance of certain conservation measures for straddling stocks on the high seas could lead to initiation of compulsory dispute settlement at the instance of the coastal State. The exception of certain fisheries matters from compulsory and binding settlement does not apply to disputes concerning stocks on the high seas. Hence if the DWFN ignores coastal State demands for cooperation it may well open itself to legal challenge via the compulsory dispute settlement procedures.

F. Marine mammals

One of the highly migratory species in Annex I is cetaceans. Although Article 64 appears to apply to all Annex I species, it is likely that the inclusion of cetaceans as subject to Article 64 is a technical error due to the fact that at one time Articles 64 and 65 were one article. Article 64 should not be considered applicable to cetaceans. In any event, whatever is said in Article 64, Article 65 provides that nothing in Part V "restricts the right of a coastal State or the competence of an international organization, as appropriate, to prohibit, limit, or regulate the exploitation of marine mammals more strictly than provided for in this part". Article 61 requires the coastal State to ensure that these animals are not endangered by overexploitation or their reproduction threatened, but under Article 65 the coastal State or a competent international organization can prohibit any taking of a marine mammal even if its population is at maximum abundance and completely safe from any excessive exploitation. In fact, Article 65 seems to add little to the authority already possessed by coastal States under other articles. Even under Article 61 a coastal State could determine that the allowable catch of a stock or species or population was zero. It is, however, fair to observe that Article 61 otherwise addresses conservation from the standpoint of utilization not preservation whereas Article 65 seems mainly to envisage the latter.

III. COMPULSORY DISPUTE SETTLEMENT PROCEDURES

From a legal perspective the availability of a legal remedy for disputes about foreign access to fisheries in an EEZ is an important condition concerning access. It is not, of course, a condition affecting whether or not access is to be granted. It might, however, bear on whether or not access can be achieved. Further, in the case of fisheries FAO has a specific role to play in connection with an arbitral procedure aimed specifically at fact-finding and, possibly, recommendation to parties in dispute.

It is highly probable, in light of conflicting views already being expressed on the fisheries provisions, that a convention as diverse and complicated as that on LOS will occasion conflicting views over its interpretation and application. Disputes of this kind are to be settled, according to Part XV, Article 279, by peaceful means through mechanisms specified in Article 33(1) of the UN Charter. If the parties' choice of means for settlement do not succeed, any dispute over interpretation and application may be submitted at the request of a disputing Party to one of a number of tribunals having jurisdiction under Section 2 of Part XV. The procedures under this section are compulsory and decisions reached are binding. Disputes relating to fisheries are to be settled in accordance with Section 2, i.e., by compulsory procedure with binding results, except that this does not apply to disputes over any of the sovereign rights relating to the living resources of the exclusive economic zone. This is a rather large exception since it deals with the largest single areas of coastal State fishery jurisdiction and excludes third-party decision-making for virtually any dispute over any living resource within the EEZ.

This exception for fisheries in Article 297(3)(a) is especially noteworthy because it is not only broadly worded ("any dispute relating to its sovereign rights ...") but also clarifies the scope of coastal authority established in Articles 56, 61, and 62 of Part V on the Exclusive Economic Zone. This clarification derives from the specification that the coastal State's sovereign rights include "its discretionary powers for determining the allowable catch, its harvesting capacity, the allocation of surpluses to other States and the terms and conditions established in its conservation and management laws and regulations". Articles 61 and 62 are unequivocal in establishing the exclusivity of coastal States decison-making authority, and Article 297 reinforces this element and confirms that the criteria for that decision are solely for the coastal State to determine in any specific instance. This is particularly important because Articles 61 and 62 provide for choices that are guided by criteria that give the coastal State ample leeway to select among a number of options.

Thus Article 61(1) regarding the allowable catch in an EEZ attaches no qualifications whatsoever to the coastal State's freedom to choose. In narrowing the provision to the specific yield from a harvested species, Article 61(2) refers to the "maximum sustainable yield" but "as qualified by relevant environmental and economic factors". Accordingly the reference to discretionary powers in Article 297 means that the coastal State has discretion to decide what the catch of a stock or species should be in light of its appreciation of "environmental and economic factors". Once a coastal State adopts measures for harvesting in its EEZ that is the end of the matter so far as appeal to an outside decision-maker who could review the choice made and impose a binding decision to change it.

This does not mean that no third party mechanism can be employed to challenge some decisions. Article 297(3)(b) provides that any party to a dispute may submit a dispute to compulsory conciliation procedures under Annex V, Section 2 in certain specific instances: (1) the coastal State fails to comply with the obligation to ensure that living resources are not endangered; (2) an arbitrary refusal by the coastal States to determine the allowable catch and its harvesting capacity; (3) arbitrary refusal to allocate a surplus declared under Articles 62, 69 and 70. In these instances a State may request compulsory conciliation which means that conciliation proceedings may be initiated by a complaining State and the coastal State must join in submission of the dispute. The coastal State is "obliged to submit to such proceedings" but cannot be forced to do so; failure to appear is not a ban to the proceedings. The commission is to issue a report including its conclusions on fact and on law, but "the report ... including its conclusions or recommendations, shall not be binding upon the parties".

Compulsory and binding arbitral procedures under the treaty could conceivably be available against a coastal State if it should seek to prescribe measures applicable both in its EEZ and to fishing in the high seas beyond. Article 116 provides that the right of fishing on the high seas is subject to coastal State rights under, inter alia, Articles 63(2) and 64. Should a coastal State interpret that provision to authorize it to prescribe measures for fishing on straddling stocks or highly migratory in the high seas, arguing that otherwise its unquestioned rights within the EEZ could be rendered ineffective, a strong argument can be made that it should be required to accept submission of a resulting dispute to compulsory procedures under Part XV, Section 2. Such a dispute is not simply about fishing for resources that are subject to the sovereign rights of the coastal State but rather concerns resources that are fished by and significant for a number of distant water Nations. Conceivably a dispute with these ingredients might arise under any of the articles specifically mentioned in Article 116.

Special note is due one of the dispute settlement procedures established by the treaty. Although a coastal State cannot be compelled to submit a dispute to it, the tribunal established pursuant to Annex VIII of the treaty could be employed to help resolve controversies arising primarily from disputed facts. The tribunal, the majority of whose members would be chosen by the Parties from a list of experts drawn up by FAO, would be empowered to make findings of fact that are conclusive between the parties but could only make recommendations to them regarding the questions in dispute. This procedure might be helpful in disposing of disputes about "facts" while leaving it to the parties to resolve the problem of how to reach an accommodation based on the "facts".

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ANNEX 2

THE PRACTICE OF COASTAL STATES REGARDING FOREIGN ACCESS TO FISHERY RESOURCES
(An analysis of bilateral agreements)

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1. INTRODUCTION

The purpose of this paper is to analyse the main features and characteristics of many of the numerous bilateral fisheries agreements concluded under the new regime of the oceans (see list in Appendix 1).

Reference to specific provisions of bilateral agreements is limited to cases where the text of these agreements has been published in official gazettes or in specialized reviews and journals, or has been transmitted to FAO.

So as to provide a comprehensive review of the practice of States with regard to foreign access to fishery resources in waters under national jurisdiction, account has been taken of the most important agreements concluded since 1975, even though some of these agreements are no longer in force. In this latter case, an appropriate mention has been included to the extent possible.

Particular care was taken to illustrate the great diversity of local conditions reflected in the agreements. The sole purpose of the comparative analyses carried out in this paper with respect to a number of salient points is to delineate general trends and not to draw up or attempt to draw up model agreements in fisheries.

2. TYPES OF AGREEMENTS

It is apparent from the numerous agreements analysed in this document that governments may take a different approach regarding the context within which they conduct fishery negotiations, the form and duration of their commitments, the parties with which they conclude agreements and the institutional mechanisms they may deem desirable to facilitate the implementation of these agreements. These points will be reviewed successively hereunder.

2.1 Structure and duration

In a number of cases, fishery agreements between two countries are but a component of their cooperation in much wider fields. Thus, several bilateral agreements concerning scientific and economic collaboration provide expressly for the subsequent negotiation of agreements on fisheries: for example, the 1967 Agreement between Egypt and Mauritania on Technical Cooperation, the 1978 Agreement on Economic, Scientific, Cultural and Technical Cooperation between Greece and Guinea, and the 1979 Treaty of Friendship between the United States and Tuvalu.

As regards agreements restricted to fishery matters, a distinction can be made between agreements providing a framework for medium-term cooperation in fisheries and self-contained agreements, which do not require to be supplemented periodically by protocols or other arrangements.

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Agreements of the former type usually define the various sectors of collaboration in fisheries and include general principles and norms governing the access of vessels of the flag State to fish resources in waters under the jurisdiction of the coastal State. The detailed terms and conditions, such as the level of fees to be paid, the number and size of vessels authorized to fish, the specific areas where they are to operate, the type of gear to be used, catch quotas, or the reporting of catches and other data, are normally set out on a yearly basis. This is done either by a unilateral decision of the coastal State, usually made after consultations with the flag State (e.g., by the United States under all their "governing international fishery agreements" 1/) or in protocols or subsidiary agreements negotiated by the two parties or on their behalf. For example, yearly protocols are concluded by Australia and Japan under their 1979 framework agreement, by the Solomon Islands and the Republic of Korea under their 1980 agreement on fisheries, and by Mozambique and Spain pursuant to the general agreement they concluded in 1982.

As to self-contained fishery agreements, they tended to be concluded for rather short periods (normally one year) especially during the 70's. This was probably due to the uncertainty, from the legal point of view, which prevailed while the new regime of the oceans was being established. The same uncertainty existed as regards the fisheries policies of coastal States and the nature and extent of compensation which they could claim. Agreements of this type are now often entered into for periods varying from two to five years. Longer-term agreements, such as the one concluded in 1964 by Mauritania and Spain for a duration of fifty years, seem to be an exception.

It would appear that long-term agreements, especially if they are self-contained and include specific provisions on such matters as the level of fees or the number of authorized vessels, are not best suited, despite the general acceptance of the new legal regime, since economic conditions are bound to change and are in any case unpredictable over long periods. Short-term self-contained agreements may also present some disadvantages today, both for coastal States and for flag States. Indeed, rational resource management planning by the coastal State and planning of investments and fishing operations by flag States would seem to require arrangements over periods of several years. This may explain an increasing preference for medium-term self-contained agreements in recent State practice, especially off West Africa 2/.

The fisheries agreements concluded in other areas, mainly in the southwest and northern Pacific Ocean are mostly framework agreements. Since they are implemented periodically through the negotiation of additional protocols or the adoption of unilateral decisions by the coastal State, they offer a certain degree of flexibility. At the same time, however, the flag State has no assurance regarding the continuity and stability of its fishing operations. This preoccupation is reflected, for example, in the agreed minutes appended to the 1982 fisheries agreement between the United States and Japan 3/. In some cases, the yearly negotiation or determination of catch quotas may unavoidably be affected by factors or circumstances not directly related to fisheries.

1/ Agreements on fishing off the coasts of the United States signed with the following countries: Bulgaria, on 17 December 1976; Cuba, on 27 April 1977 (expired on 26 September 1982); the European Economic Community, on 15 February 1977; Denmark (for the Faroe Islands), on 5 September 1977; the German Democratic Republic, on 5 October 1976; Japan, on 10 September 1982; the Republic of Korea, on 26 July 1982; Norway, on 26 January 1981; Poland, on 2 August 1976; Portugal, on 16 October 1980; Romania, on 23 November 1976 (expired on 1 July 1982); Spain, on 29 July 1982; USSR, on 26 November 1976.

2/ Two years in the case of the Agreement concluded by Senegal with EEC in 1979 and with Spain in 1982, as well as in the 1980 Agreement between Guinea-Bissau and EEC; three years in the case of the 1980 Agreement between Angola and Spain and of the 1982 Agreement between Guinea and the EEC; six years in the case of the 1979 Agreement between Equatorial Guinea and Spain.

3/ The agreed minutes appended to the agreement mention that "the representative of the Government of Japan stated that the need of nationals of Japan concerned to make plans for their annual fishing operations is important to the efficiency of their fishing operations in the fishery conservation zone and to the promotion of cooperation in the development of the United States fishing industry. In this connection, the representative of the Government of the United States stated that it was his expectation that his Government would notify the Government of Japan as early as possible of the projected allocations for each fishing year to fishing vessels of Japan and the expected dates of periodic releases of such projected allocations".

2.2 Contracting parties

In most cases, bilateral fisheries agreements are concluded between a coastal State and a flag State.

There are also a number of cases in which a framework agreement is entered into by the coastal State and the flag State and, subsequently, the agreement is implemented through detailed subsidiary arrangements made between the coastal State and public corporations or private companies having the nationality of the flag State. The fisheries agreements concluded by Japan and the Republic of Korea frequently follow this pattern 4/.

The coastal States tend to favour the involvement of the flag State as a contracting party, since it may be held responsible in cases where the corporations or companies involved fail to meet their obligations.

In certain circumstances, however, it may be deemed preferable or expedient to avoid the participation of the coastal State as a contracting party. Thus, agreements may be concluded by a coastal State directly with a public corporation or a private company for reasons of a political or diplomatic nature, to avoid the formal and often lengthy ratification process, or to prevent the flag State from having to recognize a situation which is contrary to its fisheries policy.

It would seem worthwhile to refer to a recent trend, which is relevant to the question of contracting parties to fisheries agreements. In some regions and sub-regions, coastal States are consulting with a view to coordinating their policies or adopting common policies with respect to negotiations with foreign fishermen. Thus, in June 1980, the Third Sub-Regional Conference on the Preservation, Conservation and Exploitation of Fisheries Resources comprising Cape Verde, Guinea-Bissau, Mauritania, Senegal and The Gambia, adopted a Joint Declaration in which the governments concerned agreed to strengthen their cooperation and to aim at adopting common policies with respect to foreign fishing operations. In the Western Pacific area, the Federated States of Micronesia, Kiribati, the Marshall Islands, Nauru, Palau, Papua-New Guinea and the Solomon Islands concluded in February 1982 the Nauru Agreement Concerning Cooperation in the Management of Fisheries of Common Interest. The contracting parties agreed to "seek to establish a coordinated approach to the fishing of the common stocks in the fisheries zones by foreign fishing vessels". The Agreement also indicates that the parties shall seek to explore the possibility of establishing a centralized licensing system of foreign fishing vessels.

The EEC constitutes a special case since it is itself a contracting party to a number of fisheries agreements as a result of the transfer of competence in fisheries matters which took place in 1976 5/.

4/ For example, the 1981 Agreement between the Governments of the Marshall Islands and Japan has been implemented through subsequent agreements concluded from the Japanese side by the Federation of Japan Tuna Fisheries Cooperative Associations and the National Federation of Fisheries Cooperatives Associations. The 1980 Agreement between the Governments of Solomon Islands and the Republic of Korea has been implemented through subsequent agreements concluded from the Korean side by the Deep Sea Fisheries Association of the Republic of Korea.

5/ The EEC is competent with regard to waters subject to the jurisdiction of its Member States and to which the EEC Treaty applies. In a resolution dated 3 November 1976 the EEC Council instructed the Commission to start negotiations with third countries in accordance with its directives. These negotiations were to be conducted with a view to concluding outline agreements regarding the general conditions to be applied in the future for access to resources, both those situated in the fishing zones of third countries and those in the fishing zones of the Member States of the Community.

2.3 Institutional arrangements

Several bilateral agreements provide for institutional arrangements designed to facilitate the implementation of the agreements generally or the settlement of specific disputes that might arise under the agreements.

As regards the implementation of the agreements in general, the relevant provisions are of three types. In the first instance, reference may be made to an existing body 6/. In other cases, the agreements provide for the setting up of a subsidiary body of an existing commission. For example, under the 1975 fishery agreement between Benin and France, a specialized commission is established within the framework of the commission created by the General Agreement between the two countries. In most cases, however, the agreements provide for the establishment of a new body whose members are appointed in equal numbers by the two parties. Recent examples include the agreements concluded in 1980 by Angola and Spain, Guinea-Bissau and EEC, in 1981 by Nigeria and Equatorial Guinea, and in 1982 by Mozambique and Spain.

As to the frequency of meetings, commissions or committees may meet once a year 7/, at least once a year 8/, at any time at the request of either contracting party 9/, or whenever necessary 10/. Few bilateral agreements contain provisions regarding the venue of meetings when they do. They usually lay down the principle of rotation between the two countries. The chairmanship, when specified, is also usually rotated 11/.

Agreements seldom deal with the financial aspects involved. However, the 1977 bilateral agreements concluded by Norway with the German Democratic Republic and with Poland indicate that each country will defray the expenses incurred to ensure attendance by its commissioners. The costs incurred in organizing meetings will be borne by the country on whose territory the meeting is held. The 1978 Agreement between Japan and the Soviet Union provides that the expenses incurred by members of the commission to attend meetings shall be paid by their respective governments, while joint expenses shall be paid in the form and proportion recommended by the commission.

In most cases the functions assigned to the commissions or committees are described in general terms. For example, the Joint Commission established under the 1978 fishery agreement between Equatorial Guinea and Spain is entrusted with responsibility for analysing the development of cooperation in fishery matters between the two countries. The agreements entered into by Senegal with EEC in 1979 and with Spain in 1982 provided that the committees shall ensure their correct implementation.

In addition, the commissions or committees are sometimes entrusted with more specific responsibilibites, which may involve detailed measures regarding technical cooperation 12/, the fishing operations of the flag State 13/, the preparation of an annual report on the state of stocks 14/, or the

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6/ For example, the 1977 Agreement between Chile and Spain, which has not come into force, provided that the Mixed Commission established under the Convention on trade and economic cooperation between the two countries would be responsible for taking measures to facilitate the implementation of the agreement on fisheries and for proposing to the two governments any broadening of the agreement which might strengthen the cooperation in the fishery sector.

7/ e.g., 1982 Agreement between Mozambique and Spain.

8/ e.g., 1976 Agreement between Senegal and Poland (now expired).

9/ e.g., 1981 Agreement between Equatorial Guinea and Nigeria.

10/ e.g., 1977 Agreement between Norway and the German Democratic Republic.

11/ e.g., 1978 Agreement between Senegal and Ivory Coast.

12/ e.g., 1981 Agreement between Equatorial Guinea and Cameroon.

13/ e.g., 1969 Agreement between the People's Democratic Republic of Yemen and USSR (still in force).

14/ e.g., 1982 Agreement between Senegal and Spain.

setlement of fishery disputes. The 1981 Agreement between Equatorial Guinea and Nigeria gives detailed examples of matters which may be considered by the joint technical committee established under the agreement, including the volume of catches, the number and type of vessels, fishing gear, licence fees and conditions of employment of Equatorial Guinea nationals. The 1978 Agreement between Japan and the Soviet Union provides that the commission it sets up shall consider the conservation and rational utilization of fishery resources in the north-west Pacific Ocean, draw up a cooperative fisheries programme, determine the type of statistics and other data to be submitted by the contracting parties, review the implementation of joint actions and, generally, of the agreement itself.

Generally, the agreements limit themselves to stating that the recommendations formulated by the commissions or committees will be transmitted to the respective governments. However, the recommendations of the joint committees, established under the agreements concluded by the Soviet Union with Guinea-Bissau in 1975 with Angola in 1976 and with Sierra Leone in 1976, are submitted to the governments of the contracting parties for their approval and considered to be in force unless either party objects to them within 60 days. The 1981 Agreement between Equatorial Guinea and Cameroon indicates that each country shall take such measures as are necessary to ensure observance of the decisions made by the joint technical commission set up under the agreement.

3. PRINCIPLES GOVERNING THE GRANTING OF ACCESS

3.1 The concept of surplus in bilateral agreements

Under the provisions of the United Nations Convention on the Law of the Sea, coastal States are required to promote the objective of optimum utilization of the living resources in exclusive economic zones 15/. To this end, they have to fulfil a number of obligations, the most important of which can be summarized as follows:

- Coastal States have to determine the allowable catch of the living resources in their exclusive economic zones.
- They must then determine their own capacity to harvest these resources.
- Where coastal States do not have the capacity to harvest the entire allowable catch, they have to give other States access to the surplus 16/.

The scope of this notion of surplus may best be illustrated by a reference to its origin at the Conference on the Law of the Sea. At the very first session of the Enlarged Sea-Bed Committee acting on a preparatory committee for the Conference, in March 1971, delegations were discussing the rights to be granted to coastal States with respect to fisheries in a zone adjacent to the territorial sea. The representation of Mexico made in this connection an intervention in which one can clearly identify an outline of the principles which were to become instrumental in making the notion of exclusive economic zone generally acceptable. Stressing the need for ensuring the optimum use of living resources in the interest of the international community, he suggested that the share of the resources off the shore of a coastal State which should be reserved for its nationals, should be commensurate with the State's fishing capacity at any given time. In his view, it was necessary to find a compromise solution to avoid both a situation where resources would be left to waste by the coastal State and a situation where the coastal State would not be entitled to reserve for its nationals an important part of the resources or all resources, even though it was in a position to harvest them in a rational and efficient manner.

It is important to stress that the determination of the surplus is the culmination of very complex operations, as is apparent from the provisions of the Convention itself regarding the factors to be taken into account by coastal States when determining the allowable catch 17. It should be noted that the granting of access to the surplus is not automatic, but depends on the negotiation and conclusion of agreements or other arrangements 18/.

15/ Article 62, para.1, of the Convention
16/ Article 61, para. 1, and Article 62, para. 2, of the Convention
17/ See in particular Article 61, paras. 2 and 4
18/ Article 62, para. 2, of the Convention

Although the Convention on the Law of the Sea is not yet in force, it may be of interest to analyse the references made in bilateral agreements to the determination, by the coastal State, of the allowable catch and to its views regarding both the concept of surplus and its application.

At the outset, it should be noted that a fair proportion of bilateral agreements do reflect, generally, the various mechanisms and procedures laid down in Articles 61 and 62 of the Convention concerning the determination of both the allowable catch and the coastal State's harvesting capacity, and the allocation of a surplus, if any. This is in particular the case of most agreements entered into by such important countries, from the point of view of fishing activities or fishery resources off their shores, as Canada, Japan, the Republic of Korea and the United States. The agreements concluded by the EEC with developed coastal States present the same characteristics. However, bilateral fishery agreements concluded so far by African coastal States are usually silent on the matter.

The principles embodied in the Convention are seldom reflected in their entirety and contracting parties tend to be selective, especially as regards the factors to be taken into account by coastal States when determining the allowable catch. In addition, the enunciation of principles is sometimes accompanied with provisos which indicate that account will also have to be taken of unforeseen circumstances. Several agreements mention that these circumstances must be such as to be affecting the stocks (e.g., most of the agreements concluded by the United States). Others do not contain any indication regarding the nature of these circumstances. In the case of the 1978 Agreement between New Zealand and the USSR, an exchange of letters annexed to the agreement specified that unforseen circumstances are those affecting fish stocks.

The requirement that the allowable catch should be determined on the basis of the best available scientific evidence is very frequently referred to in State practice, e.g., the 1976 Agreement between Mexico and Cuba, the 1978 Agreement between Poland and Sweden, and the Agreements concluded by the Republic of Korea in 1980 with the Cook Islands, Kiribati, the Solomon Islands and Tuvalu.

References are also made to the work of appropriate international organizations (e.g., the 1978 Agreement between Spain and Portugal, the 1978 Agreement between Poland and Sweden, and many of the agreements concluded by the EEC) or to internationally accepted criteria (e.g., most of the agreements entered into by Canada and by the United States).

Many of the agreements indicate that the coastal State will take into account the inter-dependence of stocks (for example, the 1979 Agreement between Australia and Japan, the 1980 Agreement between Norway and the EEC).

Some of the recent agreements concluded by the United States (e.g., with Japan, the Republic of Korea and Spain in 1982) provide that consideration will be given to social, economic and other relevant factors when determining the allowable catch.

It is of interest to note that in at least one case (the 1980 Agreement between the Cook Islands and the Republic of Korea) the coastal State agreed to take into account the result of consultations with the flag State.

The availability of a surplus following the determination of its harvesting capacity by the coastal State is the "raison d'etre") of the conclusion of agreements granting access. Indeed, most of these agreements do refer to the existence of a surplus, either with respect to the fish resources of the exclusive economic zone in general or to particular stocks or complexes of stocks. As the determination of a surplus will depend on periodic assessments of the state of exploitation of the stocks, several agreements concluded for a period of several years specify that the flag State will have access to the fish resources of the coastal State only if a surplus becomes available. This is the case of the agreements concluded by Norway with Portugal in 1980 and with Spain in 1981, and by Mexico with Cuba in 1976.

It is customary for agreements to provide that the coastal State will consult the flag State before deciding upon the portion of the surplus which will be allocated to that State: for example, the 1977 Agreement between Canada and Cuba, the 1977 Agreement between Norway and Poland, the 1978 Agreement between Canada and Japan, the 1980 Agreement between Kiribati and the Republic of Korea, the 1981 Agreement between the Marshall Islands and Japan, and the 1981 Agreement between Canada and the EEC.

A number of agreements, especially when they provide for access on a reciprocal basis, do not refer to the determination of the harvesting capacity of the coastal States and to the existence of a surplus, but only set out the catches allotted to the fishing vessels of the contracting parties (e.g., the agreements concluded by the EEC with Sweden in 1977, with Norway in 1980, and with Spain in 1980).

3.2 References in bilateral agreements to the selection criteria listed in the Convention on the Law of the Sea

Article 62, paragraph 3, of the Convention on the Law of the Sea provides that the coastal State, in giving access to its exclusive economic zone, shall take "all relevant factors" into account. It then lists a number of factors, which are not meant to be exhaustive. Apart from the first one, which relates to the significance of the living resources of the area to the economy of the coastal State concerned and its other national interests, these factors provide guidelines for the selection of States to be granted access. They will be considered successively hereunder, in the light of the recent practice of States.

(a) Provisions of Article 69 (Right of land-locked States) and of Article 70 (Right of States with special geographic characteristics

Under Article 69, paragraph 1, of the Convention on the Law of the Sea, land-locked States shall have the right to participate, on an equitable basis, in the exploitation of an appropriate part of the surplus of the living resources of the exclusive economic zones of coastal States. This right, however, may be exercised only in the same sub-region or region and subject to certain conditions of an economic and geographical nature. Article 70, paragraph 4, contains identical provisions relating to coastal States with special geographic characteristics, as defined in paragraph 2, of the same article.

It would appear that none of the bilateral agreements concluded so far makes an express reference to the right of these two categories of States.

Nevertheless, it may be worthwhile to mention a few initiatives taken in this regard by African States. In the 1974 Declaration on the Law of the Sea, adopted by the Council of Ministers of the Organization of African Unity, African countries recognized that land-locked and other disadvantaged countries are entitled to share in the exploitation of living resources of neighbouring economic zones on an equal basis with the nationals of coastal States, under such regional and bilateral agreements as may be worked out. Mention could also be made of two current projects involving land-locked States and States with special geographic characteristics of Africa. The member countries of the West African Economic Community are negotiating a convention providing for the establishment of a company to be owned jointly by the three land-locked (Mali, Niger and Upper Volta) and the three coastal (Ivory Coast, Mauritania and Senegal) member countries of the Community. The vessels of the company would operate in the waters under the jurisdiction of the coastal countries. Negotiations have also started among the coastal countries bordering on the Gulf of Guinea, which include States with special geographic characteristics. The draft agreement now under consideration refers explicitly to both the 1974 OAU Declaration and to the relevant provisions of the Convention on the Law of the Sea concerning States with special geographic characteristics.

(b) The requirements of developing States in the sub-region or region in harvesting part of the surplus

Very few agreements seem to take into consideration the factor relating to the requirements of developing States in the sub-region or region. In the first instance, mention can be made of three agreements which are no longer in force: in the agreements concluded in 1975 by Brazil with Barbados, Suriname and Trinidad and Tobago, the contracting parties indicated that it was desirable for the developing countries of the region to grant each other preferential treatment in the access to their fishery resources. Subsequently, a number of agreements have been entered into between developing countries belonging to the same sub-region or region. Although they do not refer explicitly to the factor under consideration, it would appear that they take it into account. For example, the 1976 agreement between Mexico and Cuba refers to the concensus emerging from the Conference on the Law of the Sea and to the fact that both contracting parties are developing countries.

The limited number of bilateral fisheries agreements between developing countries of the same region may perhaps be due to reasons of an economic nature and to their needs for technology which only other countries can provide.

(c) The need to minimize economic dislocation in States whose nationals have habitually fished in the zone

The above factor is mentioned frequently in agreements granting access to fisheries in waters under the jurisdiction of developed countries. Thus, the framework agreements entered into by the United States with Bulgaria, Cuba, EEC, Denmark, the German Democratic Republic, Japan, the Republic of Korea, Norway, Poland, Portugal, Spain and the USSR provide that "in determining the portion of the surplus that may be made available to vessels of the country, the Government of the United States will decide on the basis of the factors identified in the United States law, including: whether, and to what extent, the fishing vessels of such nations have traditionally engaged in fishing in such fishery". Similarly, the agreements concluded by Canada with the EEC, the German Democratic Republic, Japan, Portugal, Spain and the USSR indicate that account is taken of traditional fishing by the vessels of these countries off Canada's coasts.

The 1978 Agreement between Sweden and Poland refers specifically to the need for minimizing the consequences caused by the extension of national jurisdiction.

References to traditional fishing and to the need for reducing economic dislocation are exceptional in cases where the coastal State is a developing country. Examples include the agreements concluded by the EEC with Senegal in 1979 and with Guinea-Bissau in 1980, and the 1980 Agreement between the Cook Islands and the Republic of Korea.

(d) The need to minimize economic dislocation in States which have made substantial efforts in research and identification of stocks

This factor is obviously related to the preceding one, since the contribution of flag States to research and to stock assessment has normally been associated with their fishing operations in a given area. Nevertheless, bilateral agreement include fewer references to the contribution of the flag State to research than to traditional fishing. Those which do so are the ones concluded by Australia, New Zealand and the United States. The agreements entered into by developing coastal States, especially in West Africa, do not mention this factor at all.

3.3 Other selection criteria followed in State practice

At the outset, it should be stressed that the factors which guide coastal States in the selection of the flag States are not necessarily identified in the agreements themselves. This is often the case of the factors having political or ideological connotations.

A factor which is not specifically listed in the Convention on the Law of the Sea and is frequently taken into account by coastal States, is cooperation with regard to trade in fish and fishery products. For example, in an exchange of letters attached to the 1979 Agreement between Australia and Japan, the Government of Australia states that, when granting access to the surplus to Japanese fishing vessels, it will take into consideration, inter alia, the development of cooperation with regard to access to the Japanese market for Australian fish and fish products.

As a result of the 1980 amendment to the 1976 Fishery Conservation and Management Act, the agreements concluded recently by the United States (with Portugal in 1980, with Norway in 1981 and with Japan, the Republic of Korea and Spain in 1982) include a provision whereby, when determining the portion of the surplus that will be made available to the vessels of the flag State, the United States Government will also take into account the cooperation of that State in enhancing trade and trade opportunities for United States fisheries products.

Similarly, a 1981 exchange of letters between Canada and the EEC provides that the maintenance of allocations to EEC vessels will be contingent upon the fulfilment by the EEC of its obligations with regard to cooperation in fish trade.

Among the other factors referred to in State practice, one could mention cooperation in developing the coastal State's fishing industry, cooperation in enforcement of the coastal State's regulations or strengthening of regional solidarity.

4. CONDITIONS GOVERNING ACCESS

The degree of precision and detail with which bilateral agreements lay down the terms and conditions of access varies considerably. This is not surprising if one bears in mind the types and structure of bilateral agreements reviewed in Section 2 above and the ways in which framework agreements, in particular, are implemented periodically through the negotiation of additional protocols or the adoption of unilateral decisions by the coastal State.

Article 62, paragraph 4, of the Convention on the Law of the Sea, provides that nationals of other States fishing in the exclusive economic zone of a coastal State shall comply with the conservation measures and with the other terms and conditions established in its laws and regulations. It then indicates that national legislation must be consistent with the Convention and, without being exhaustive, lists a series of points which may be included in laws and regulations related to access. In practice, these points are either covered directly in the provision of bilateral agreements or the latter limit themselves to making cross-references to the relevant national legislation. They will be reviewed hereunder.

4.1 Requirements concerning fishing operations 19/

The main objective of the requirements imposed on the flag State with regard to fishing operations is to direct and control fishing effort. This objective may be attained through a wide range of methods depending on the particular circumstances of each case. Examples are given below merely to illustrate the variety of possible situations and solutions.

In many cases, the agreements or the annexes or protocols thereto prescribe the numbers and type of vessels flying the flag of one contracting party that are authorized to fish in waters under the jurisdiction of the other (e.g., the 1976 Agreement between Iceland and Norway, the 1982 subsidiary agreement between Australia and Japan, and the 1982 Agreement between Guinea and Spain). The vessels are sometimes listed by name (e.g., the 1975 Agreement between Iceland and the Federal Republic of Germany). In principle, licences are not transferable. However, some agreements provide that once a licence has been granted to a particular vessel which, subsequently, is not in a position to use it as a result of "force majeure", it may be assigned to another vessel of the same class at the request of the flag State (e.g., 1982 Agreement between Senegal and Spain, and 1982 Agreement between Guinea and the EEC).

Instead of being expressed by reference to the number of fishing vessels, the limitation imposed on the flag State may also be set out with reference to a maximum tonnage figure applicable to the fishing fleet which has been granted access (e.g., 1982 Agreement between Morocco and Spain).

In some cases, the agreements lay down specific criteria regarding the effective ownership of the vessels flying the flag of the other contracting party. Detailed provisions in this respect are found in the few agreements in which a developing coastal State grants access to another developing coastal State under particularly favourable terms and conditions. For example, the Nigerian vessels authorized to fish in the waters of Equatorial Guinea under the 1981 agreement between the two countries must: (i) fly the Nigerian flag; (ii) have on board a crew made up of not less than 50% African nationals; and (iii) belong to a company whose capital is owned not less than 50% by Nigerians. Provisions reflecting the same concern are contained in the 1977 Agreement between Trinidad and Tobago and Venezuela, the 1982 Agreement between The Gambia and Senegal, and the 1982 Agreement between Guinea-Bissau and Senegal.

19/ These points are covered in litt. (b), (c) and (d) of paragraph 4 of Article 62 of the Convention.

It is customary for bilateral agreements to ensure that the fishing operations of foreign vessels will not adversely affect the interest of the fishermen of the coastal State. For this reason, foreign vessels are normally prevented from fishing in areas close to the shore (e.g., the 1981 Agreement between Norway and Spain, and the 1982 Agreement between Equatorial Guinea and Cameroon). These areas may, however, be open to foreign vessels when they are not fully exploited by the fishermen of the coastal State as is the case with respect to certain fisheries along the coasts of Alaska and off US islands in the North Pacific and the Bering Sea. The delimitation of the area or areas where foreign vessels are authorized to fish may also be influenced by other factors, such as the need to protect nursery grounds (e.g., the 1982 arrangement between the EEC, Iceland and Norway prohibiting the fishing for capelin in certain areas of the north-east Atlantic as defined by ICES), the desirability of avoiding possible gear conflicts (e.g., the 1982 subsidiary agreement between Australia and Japan), the size of vessels (e.g., the 1982 Agreement between Guinea and the EEC) and the need to avoid over-exploitation of certain stocks.

A preliminary remark may be made as regards catch quotas. Under the previous regime of narrow areas of national jurisdiction, quotas were usually discussed and agreed upon within the framework of multilateral conventions setting up regional fishery commissions, especially in the North Atlantic. With the establishment of 200 mile zones, the pattern of negotiation has changed radically, since quotas are now granted mostly by coastal States on a bilateral basis and are therefore the object of an increasing number of agreements.

The allocation of quotas is a practice which is still largely limited to cases where the coastal State is a developed country with the necessary scientific, administrative and enforcement support and the required logistical facilities (e.g., in the North Sea, the North-East and North-West Atlantic and the North Pacific). None of the numerous agreements concluded by the coastal States of North-West Africa provides for the allocation of quotas as a measure to limit fishing effort. With very few exceptions, the same situation prevails in the South Pacific area insofar as developing island States are concerned.

As rare examples of agreements to which a developing coastal State is a party and which provide for catch quotas with respect to certain species, one can mention the 1980 Agreement between Angola and Spain and the 1982 Agreement between Mozambique and Spain.

It would be beyond the scope of this document to review the numerous other measures, such as closed seasons, gear characteristics, minimum sizes of fish, port facilities or rotation of crews, which are laid down in the agreements or their technical annexes. It is, however, interesting to note that an increasing number of bilateral agreements now include provisions designed to protect marine mammals (e.g., the agreements concluded by the United States, the 1980 Agreement between the Cook Islands and the Republic of Korea, and the 1982 Agreement between New Zealand and Japan).

4.2 Fees and other forms of compensation 20/

The authorization granted to foreign vessels to fish in extended zones of national jurisdiction is normally subject to the payment of fees. In many cases, additional compensation is provided for in the form of technical or economic cooperation with the coastal State.

In State practice, there are essentially two ways of levying fees in exchange for the right of access:

(i) Fees may consist of a lump sum to be paid for a fixed period, usually one year, to cover the fishing operations of all the vessels of the flag State. For example, the 1982 Agreement between Australia and Japan and a number of agreements concluded by developing island States in the South Pacific provide for such a total fee. Only a few of these agreements refer to the basis upon which the fee has been calculated. It would appear that a figure amounting to around 5% of the value of the estimated catch has been used. Other factors taken into consideration would seem to include the risks involved in developing a new fishery or the expenses incurred in placing observers on board.

20/ This point is covered in litt. (a) of para. 4 of Article 62 of the Convention

(ii) Fees may be computed on the basis of specific factors, the most important of which are the gross registered tonnage (GRT) of the vessels and actual catches, or a combination of these factors.

No trend is discernable, either regionally or by type of fishery, from the information available regarding preferences for the use of one or other of these factors as a means for calculating fees. For instance, in West Africa fees for tuna fishing are sometimes based on the GRT of the foreign fleet (e.g., the 1982 Agreement between Mauritania and a tuna fishing company based in Senegal) and sometimes on the weight of the tuna caught (e.g., the 1982 Agreement between Senegal and the EEC). Both methods of computation may be found in the same agreement for different fisheries (e.g., the 1982 Agreement between Guinea-Bissau and the EEC which provides for fees based on the GRT of vessels for trawl fishing and for fees based on the weight of catches for tuna fishing). The value of the fish landed is also used as a basis for computing fees (e.g., part of the fee to be paid by foreign vessels fishing in US waters).

Licence fees normally require to be paid in cash. Payment in kind is authorized in exceptional cases mainly when the coastal State needs fresh fish for its internal market or industry. For example, under the 1976 Agreement between Mauritania and Portugal, Portuguese fishermen had to pay an annual fee three quarters of which were to be paid in cash and the balance in the form of fish landed in Nouadhibou. Under the 1982 Agreement between Guinea and the EEC the owners of the EEC authorized fishing vessels have the choice between paying 100 ECU (European Currency Unit) per GRT or landing a certain quantity of fish in Guinean ports.

Any attempt at comparing the level of licensing fees set out in various agreements would not be very fruitful. In some instances the licensing fee is the only compensation obtained by the coastal State in exchange for the granting of fishing rights and therefore the fee can be rather high. In other cases, besides the proceeds of the licence fees bilateral agreements provide for granting to the coastal State additional forms of compensation. For instance, under the 1976 Agreement between Tunisia and Italy, the Italian Government undertook to contribute a sum of Lire 2,500 millions annually for the implementation of fishery development projects in Tunisia. All the agreements concluded by the EEC with West African coastal countries provide that in return for the fishing opportunities granted to EEC vessels and in addition to licence fees, the coastal State will receive financial compensation which shall be used to finance projects and services relating to fishing 21/.

Frequently, bilateral agreements provide that the flag State will grant loans to the coastal State on favourable terms. Thus, the 1982 Agreement between Morocco and Spain provides that Spain would open a credit line of US$15 million to be reimbursed in 20 years at a 5.5 percent rate of interest.

Several agreements envisage that the flag State will contribute to the development of the fishery industry of the coastal State, but they do not provide any details on the financial aspects involved. In fact, they refer solely to the conclusion of subsequent agreements to cover particular projects.

The conclusions of ancillary agreements providing for the supply of goods and services has been frequent in the South Pacific area until recently. Since 1981/82 this practice seems to be discontinued in most cases 22/.

In a number of cases the owners of foreign fishing vessels have to arrange for seamen of the coastal State to be trained on board 23/. Several bilateral agreements also contain provisions to the

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21/ 2,100,000 ECU in the 1982 Agreement with Guinea; 4,275,000 ECU in the 1982 Agreement with Guinea-Bissau; 2,500 million of CFA francs in the 1982 Agreement with Senegal.

22/ For Palau, see explanations on the national policy in this respect in FAO/FFA: "Workshop on the harmonization and coordination of fisheries regimes and access agreements", Suva, Fiji, 22 February to 5 March 1982, Regional Compendium of Fisheries Legislation, Volume 1, p.6.

23/ e.g., 1975 Agreement between Guinea-Bissau and USSR; 1980 Protocol between Mauritania and USSR.

effect that the flag State will send experts to the coastal State to provide technical assistance in various sectors of the fishing industry 24/. In other cases, the flag State agrees to grant fellowships and to accept trainees in its own teaching institutions 25/. The flag State normally bears all relevant expenses.

As regards cooperation in scientific research, several agreements envisage joint programmes and other activities by the flag State and the coastal State. The extent and nature of such cooperation vary depending on whether the agreement is concluded between developed countries or between developed and developing countries. Thus, under a 1977 agreement, the USA and the EEC cooperate in the conduct of scientific research for managing and conserving living resources subject to the fishery management authority of the USA. This cooperation includes compilation of the best available scientific information for the management and conservation of stocks of mutual concern. The appropriate agencies of the two parties will enter into such arrangements as may be necessary to facilitate cooperation, such as the exchange of information and scientists, regular meetings between scientists and the implementation of a standardized system for the collection and archiving of relevant statistical and biological information.

Agreements providing for joint research activities between a developed and a developing country usually describe in detail the contribution that will be made by the developed country. For example, the 1976 Agreement between Sierra Leone and the Soviet Union indicates that the Soviet Union will render technical and economic assistance in conducting scientific surveys on fish stock assessment. The Soviet Union is to provide a research vessel equipped with the necessary fishing equipment and gear and manned with crew and scientists. Except for the salaries of five Sierra Leonean fishery specialists, the USSR will bear all expenses for research activities to be carried out on board the vessel. Similar provisions are found in the agreements concluded by the Soviet Union with The Gambia and Guinea-Bissau in 1975, Angola in 1976 and Seychelles in 1978. The three agreements concluded in 1982 by the EEC with Guinea, Guinea-Bissau and Senegal include a provision by which the Community undertakes to contribute to the financing of coastal States scientific programmes in order to improve information on their fishery resources 26/. There are a few agreements which provide for the setting up by the flag State of research centres or laboratories in the territory of the coastal State 27.

Some bilateral agreements contain provisions whereby the flag State grants privileges or facilities of a commercial nature to the coastal State in exchange for the right to fish in waters under its jurisdiction. For example, pursuant to an agreement entered into with Senegal in 1977, Ivory Coast authorized the import of Senegalese fishery products free of all customs duties. The 1971 Agreement between Congo and Gabon provides that each State will export to third countries only such fish that cannot be marketed in either country.

In a more general fashion, the 1981 Agreement between Canada and the EEC provides that the two parties will carry out periodic bilateral consultations regarding the development of further cooperation in fish trade and that they shall encourage economic and commercial cooperation in the field of fisheries. In the 1978 Agreement between New Zealand and the Republic of Korea, the parties agreed to cooperate in respect to the expansion of markets, including improved market access, for fish and fish products originating in New Zealand 28/.

There is a definite trend to include, in bilateral fishery agreements, provisions aimed at encouraging the establishment of joint ventures between the flag State and the coastal State. These provisions are sometimes couched in very general terms. For instance, under the 1977 Agreement

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24/ e.g., 1980 Agreement between Angola and Spain

25/ e.g., 1975 Agreement between Benin and France

26/ CFA francs 100,000,000 in the case of Senegal, 250,000 ECU for Guinea-Bissau, and 200,000 ECU for Guinea

27/ e.g., 1973 Agreement between Mauritania and the Soviet Union

28/ See also the 1976 Agreement between Mexico and Cuba

between Iran and the Republic of Korea both parties agreed to encourage and facilitate cooperation in the field of fisheries between their nationals, particularly through joint ventures and other appropriate means, within the framework of their respective laws and regulations. Joint ventures are envisaged in various sectors, including fishing in international waters, fish processing, international marketing of fishery products, manufacture of fishing gears, ship-building and repair. Similarly, the 1975 Convention between Colombia and Ecuador provides that the two countries will encourage the establishment of joint ventures for the purpose of developing the exploitation and utilization of living resources in waters under their respective jurisdictions.

A few bilateral agreements are somewhat more specific and include details on the characteristics of the joint ventures envisaged. This is in particular the case of the 1978 Agreement between Brazil and Barbados and the 1978 Agreement between Mauritania and the Libyan Arab Jamahiriya.

5. SURVEILLANCE AND ENFORCEMENT

Coastal States attach considerable importance to the question of control over the activities of foreign fishing vessels authorized to operate in waters under their jurisdiction. This concern is usually reflected in the provisions inserted in bilateral agreements regarding enforcement methods and procedures. In this respect, the Convention on the Law of the Sea 29/ provides that nationals of other States fishing in the exclusive economic zone shall comply with the conservation measures and with the other terms and conditions established in the regulations of the coastal State. It goes on to state that these regulations may relate, inter alia, to enforcement procedures. Furthermore, in the exercise of its sovereign rights to explore, exploit, conserve and manage the living resources in the exclusive economic zone, the coastal State may take such measures 30/ including boarding, inspection, arrest and judicial proceedings, as may be necessary to ensure compliance with the laws and regulations enacted by it in conformity with the Convention.

5.1 Prevention of infringements

Whatever the legal nature of the extended zone of jurisdiction claimed by the coastal State, the latter is always vested with enforcement authority under existing bilateral agreements. The only exceptions seem to be cases where two adjacent coastal States have not yet reached final agreement on delimitation in maritime border areas. This is so in various parts of the boundary areas between the Canadian fishing zone and the US fishery conservation zone. Pending a definitive agreement on delimitation, Canada and the USA have agreed that in these areas enforcement measures against fishing vessels flying the flag of other countries may be carried out by either party, while enforcement as between the two parties will be conducted by the flag State 31/.

A great number of bilateral agreements lay down the principle that foreign vessels are to comply with the fishery laws and regulations of the coastal State. This presupposes that foreign fishermen are familiar with the contents of such laws and regulations. To this end, some bilateral agreements indicate that the flag State will be provided with all relevant legislation 32/, or that appropriate advance notice of any new measure taken by the coastal State will be provided so as to enable foreign fishermen to abide by them 33/.

29/ Article 62, para. 4

30/ Article 73, para. 1

31/ e.g., 1977 Agreement between Canada and the USA. For a slightly different solution to the same problem, see the 1981 memorandum of understanding between Indonesia and Australia concerning the implementation of a provisional fisheries surveillance and enforcement arrangement

32/ e.g., 1977 Agreement between Finland and the Soviet Union

33/ e.g., 1978 Agreement between Canada and the EEC, and 1980 Agreement between the EEC and Spain

In some cases, the agreements provide that foreign fishermen must also comply with the relevant rules of international law. Thus, the 1977 Agreement between Guinea-Bissau and France stated expressly that the right to fish should be exercised in accordance with the laws and regulations in force in Guinea-Bissau and with the rules of international law.

Very often agreements contain a provision whereby the flag State undertakes to adopt all necessary measures to ensure that its nationals and vessels will comply with the provisions of the agreement.

Several agreements prescribe a number of measures aimed at facilitating the task of the enforcement authorities in localizing and identifying foreign fishing vessels at sea. Before beginning their fishing activites, vessels may be required to provide the coastal State's authorities with a set of detailed identifying information 34/. Moreover, foreign vessels are sometimes required to hoist a special flag or pennant 35/ or to display on board special identification marks in such a way that they are visible from both sides of the vessel or from the air 36/. In the North-East Atlantic and North Sea areas, several agreements require foreign fishing vessels to report their position daily 37/ or weekly 38/ to the designated authorities of the coastal State. A more sophisticated solution consists in the installation on each foreign vessel of equipment enabling an enforcement cutter or aircraft to identify the vessel and ascertain its position. Such equipment does not require any operation or repair activity on the part of the vessel crew. This solution could be imposed within the next few years on all foreign vessels fishing in the exclusive economic zone of the USA.

5.2 Inspection and control

In addition to practical measures designed to prevent infringements and facilitate the localization of foreign fishing vessels, bilateral agreements often contain provisions regarding the measures to be taken by the coastal State to ensure compliance with its laws and regulations, including the conduct of inspection operations and their possible legal consequences.

The agreements concluded by Norway with Finland, Sweden and the Soviet Union in 1976 and with the German Democratic Republic and Poland in 1977, and those concluded by the EEC with Denmark (Faroes) and Sweden in 1977 and with Norway and Spain in 1980, contain a general provision enabling the coastal State to take, in accordance with international law, such measures as may be necessary to ensure that foreign fishing vessels comply with the provisions of the agreement.

In many other cases the agreements are more detailed and provide that a set of documents, including a fishing log book of a commonly agreed model and updated daily, must be available at any time for inspection 39/. Inspectors are also entitled to inspect fishing gears and catches.

34/ Including: the name of the vessel; the name and business address of the owner; the official number and the number prescribed under the bilateral agreement; the port of registry and usual port of operation; a photograph of the vessel accompanied by its general description (including colour of side, deck house, top of house and trim, tonnage, capacity, speed, horsepower of the main engine, etc.), the radio frequency and radio call letters for the establishment of communications; the methods and equipment employed for fishing; the ocean area in which, and the season and period during which fishing will be conducted; and any other information necessary for the identification of the vessel and other enforcement functions.

35/ e.g., 1976 Agreement between Tunisia and Italy

36/ e.g., 1979 Agreement between Guyana and Suriname, 1981 Agreement between Japan (Associations) and Papua New Guinea

37/ e.g., 1975 Agreement between Iceland and the Federal Republic of Germany; 1976 Agreement between Iceland and Norway

38/ e.g., 1977 Agreement between Norway and the German Democratic Republic; 1977 Agreement between Norway and Poland

39/ e.g., 1977 Agreement between Norway and Poland; 1977 Agreement between Norway and the German Democratic Republic; 1978 Agreement between Guyana and Cuba

Bilateral agreements often provide that when a violation has been ascertained, the coastal State's officials may seize the vessel and escort it to a port. In that situation, the authorities of the flag State must be informed without delay. The Convention on the Law of the Sea 40/ provides that in cases of arrest or detention of foreign vessels, the coastal State shall promptly notify the flag State, through appropriate channels, of the action taken and of any penalties subsequently imposed. Several agreements include specific provisions to protect the rights of the arrested vessel and its crew. For example, under the 1976 Agreement between Tunisia and Italy, the captain of the vessel was authorized to communicate with his embassy. The 1976 Agreement between the USA and the German Democratic Republic provides that the arrested vessel will be allowed to use its communications' facilities to report the situation to its owners and that crew members will have the right to choose competent counsel for their defence.

A number of agreements 41/ provide for the prompt release of the arrested vessels and their crews upon the posting of reasonable bond or other security; these are the exact words used in Article 73, paragraph 2, of the Convention on the Law of the Sea.

5.3 Penalties

The penalties most frequently mentioned in bilateral agreements include the withdrawal of the fishing licence, fines 42/ and the seizure of gear and catches. Imprisonment and other forms of corporal punishment are sometimes specifically excluded by bilateral agreements 43/. Agreements concluded by the USA or the agreed minutes attached thereto provide that in the case of violation of fishery regulations the representative of the US Government will recommend to the court that the penalty not include imprisonment or any other form of corporal punishment 44/. Under the Convention on the Law of the Sea, the coastal State penalties for violations of fisheries regulations in the exclusive economic zone may not include imprisonment, in the absence of agreement to the contrary by the States concerned, or any other form of corporal punishment 45/.

6. SETTLEMENT OF DISPUTES

A distinction should be drawn between disputes concerning the interpretation or application of bilateral agreements and incidents occurring during fishing operations.

6.1 Disputes concerning the interpretation or application of bilateral agreements

Only a few agreements contain provisions on the question of settlement of disputes between contracting parties regarding the interpretation or application of bilateral agreements. It has been seen above that, in some cases, the bodies established to advise generally on the implementation of the agreements are also specifically entrusted with the settlement of disputes.

40/ Article 73, para. 4

41/ e.g., 1977 Agreement between the Soviet Union and Japan, and all the governing international fishery agreements concluded by the USA with other States in 1976 and 1977

42/ The level of the fines is very seldom set out in the agreements themselves. See, however, the 1982 Agreement between Guinea and the EEC

43/ e.g, 1976 Agreement between Mexico and Cuba; 1976 Agreement between Mexico and the USA

44/ It may be noted, however, that in the agreed minutes attached to the agreements concluded in 1982 with Japan and Spain, the USA noted that this provision does not apply in the case of enforcement related offences such as assault on an enforcement officer or refusal to permit boarding and inspection

45/ Article 73, para. 3

In some cases the agreements include only very general provisions. Thus, under the arrangements entered into in 1981 by Papua-New Guinea and a number of Japanese associations, it has been agreed that any dispute regarding the interpretation or the implementation of the arrangements should be settled amicably by the parties 46/.

The 1977 Agreement between the EEC and Sweden goes one step further and provides that if no settlement is reached following consultations, and where it is claimed that a contracting party has manifestly failed to comply with specified provisions or conditions established by the agreement, the dispute will be the subject of arbitration. An annex to the agreement contains detailed provisions on the composition of the arbitral tribunal, the binding character of its decisions and the apportionment of costs 47/.

6.2 Disputes arising from incidents during fishing operations

As regards incidents occurring during fishing operations, many agreements recently concluded in the South Pacific region include a general provision depending to which the government of the flag State shall ensure that all necessary measures are taken to ensure prompt and adequate compensation to the coastal State or citizen for any loss or damage that is caused by the flag State's fishing vessel 48/.

Reference can be made to the 1976 Agreement between Finland and the Soviet Union. A joint commission set up under the agreement is responsible for dealing with claims for compensation in connection with damage sustained by vessels and equipment during fishing operations in the Finnish fishing zone. The functions and methods of work of the Commission are specified in detail. If the Commission cannot agree on a recommendation regarding compensation or if one of the parties is unwilling to accept the recommendation, the Commission may recommend that the matter should be settled in court or by arbitration.

Several of the agreements concluded by the USA and other States provide for the establishment of fisheries boards to perform conciliation functions in respect of claims advanced by a national of either State against a national of the other State, regarding financial loss resulting from damage to or loss of the national's fishing vessel or fishing gear. For example, the American-Spanish Fisheries Board established under an annex to the 1982 Agreement between the USA and Spain consists of four members, two appointed by each country. At least one of the two members must have knowledge of the general principles of international law, particularly those relating to fisheries matters. The Board, whose decisions are made unanimously by those members present and voting, prepares a report containing its findings on the facts giving rise to the claim, the extent of damage or loss, the degree of the respondent's or claimant's responsibility and the amount which should be paid as compensation for losses arising from the incident. The report is transmitted to the claimant, to the respondent and to the two governments. If one of the parties to the conciliation proceeding refuses to settle in accordance with the findings of the Board, the latter will encourage the parties to submit their dispute to binding arbitration. The agreements which provide for the establishment of such boards also contain detailed provisions regarding procedures to be followed, applicable law and apportionment of expenses.

46/ Similar provisions may be found in the 1982 Agreement between Mauritania and Spain and in the 1982 Agreement between Guinea and the EEC.

47/ Similar provisions may be found in the 1979 Agreement between Senegal and the EEC and in the 1982 Agreement between Senegal and Spain.

48/ e.g., the 1980 Agreement between Cook Islands and the Republic of Korea; the 1978 Agreement between New Zealand and Japan.

APPENDIX 1

Selected Bilateral Fishery Agreements

Denmark/Sweden	7 January 1975	Exchange of notes on mutual fishing rights
Italy/Senegal	17 January 1975	Agreement on marine fisheries
France/Norway	30 January 1975	Exchange of letters concerning fishing
USA/USSR	26 February 1975	Agreement in the form of an exchange of notes amending the agreement relating to the consideration of claims resulting from damage to fishing vessels and gear measures to prevent fishing conflicts
Benin/France	27 February 1975	Convention concerning marine fishing
Brazil/ Trinidad & Tobago	28 February 1975	Shrimp fishing agreement
Barbados/Brazil	28 February 1975	Shrimp fishing agreement
Brazil/USA	14 March 1975	Agreement concerning shrimp
The Gambia/USSR	18 March 1975	Agreement on cooperation in the field of fisheries
France/Mauritania	26 March 1975	Protocol of agreement on fishing
Brazil/The Netherlands (Suriname)	4 April 1975	Shrimp fishery agreement
Norway/USSR	11 April 1975	Agreement on cooperation in the field of fisheries
Guinea Bissau/USSR	11 April 1975	Agreement on cooperation in the field of fisheries
Senegal/Spain	16 May 1975	Convention on marine fisheries with exchange of letters
Colombia/Ecuador	23 August 1975	Convention on delimitation of marine and submarine areas and maritime cooperation
Mauritania/Poland	17 September 1975	Agreement on intergovernmental cooperation in the field of fishing
Mauritania/Norway (KSAS Norglobal & Co.)	27 September 1975	Protocol of agreement
Italy/Tunisia	30 October 1975	Protocol of agreement
Finland/Sweden	24 November 1975	Exchange of notes concerning fishing
Japan/ Papua New Guinea	26 November 1975	Exchange of letters concerning fishing
Belgium/Iceland	28 November 1975	Fisheries agreement relating to the extension of the Icelandic fishery limits to 200 nautical miles

Germany, Fed.Rep./ Iceland	28 November 1975	Fisheries agreement relating to the extension of the Icelandic fishery limits to 200 nautical miles
Canada/Norway	2 December 1975	Agreement on mutual fisheries relations
Poland/Sweden	9 December 1975	Agreement on the mutual granting of fishing rights within their sea fishery zones
Canada/USSR	22 December 1975	Fishery agreement
Korea, Rep./Morocco	23 February 1976	Agreement on fisheries cooperation
Iceland/Norway	10 March 1976	Exchange of notes on fishing
Mauritania/Portugal	12 March 1976	Agreement on cooperation in the field of marine fisheries
Poland/Senegal	16 March 1976	Agreement concerning marine fisheries
Denmark (Faroes)/ Iceland	20 March 1976	Fishery agreement
India/Sri Lanka	23 March 1976	Agreement on the maritime boundary in the Gulf of Mannar and the Bay of Bengal and related matters
Morocco/Portugal	25 March 1976	Agreement concerning marine fisheries
France/Mauritania	15 April 1976	Exchange of letters on lobster fishing
Angola/USSR	May 1976	Agreement on cooperation in fisheries
German Dem.Rep./ Guinea	14 May 1976	Protocol of agreement concerning the exploitation of Guinean fishery resources
Canada/Poland	14 May 1976	Agreement on mutual fisheries relations
Sierra Leone/USSR	14 May 1976	Agreement on cooperation in the field of fisheries
Canada/USSR	19 May 1976	Agreement on mutual fisheries relations
Iceland/United Kingdom	1 June 1976	Agreement on fisheries
Canada/Spain	10 June 1976	Agreement on mutual fisheries relations
Italy/Tunisia	19 June 1976	Agreement concerning fishing by Italian vessels in Tunisian waters
Cuba/Mexico	26 July 1976	Fishery agreement
Canada/Portugal	29 July 1976	Agreement on mutual fisheries relations
Korea, Rep./ The Gambia	July 1976	Agreement on fisheries cooperation
Poland/USA	2 August 1976	Agreement concerning fisheries off the coasts of the United States with agreed minutes and related letters
German Dem.Rep./ USA	5 October 1976	Agreement concerning fishing off the coasts of the United States with annexes, agreed minutes and related letters

Finland/USSR	11 October 1976	Agreement on certain questions relating to fishing in the Finnish fishing zones
Norway/USSR	15 October 1976	Agreement on mutual fishery relations
Romania/USA	23 November 1976	Agreement concerning fisheries off the coasts of the United States with agreed minutes and exchange of letters
Mexico/USA	24 November 1976	Fisheries agreement with exchange of notes
Canada/France	26 November 1976	Provisional fishery agreement
USA/USSR	26 November 1976	Agreement concerning fisheries off the coasts of the United States with agreed minutes and related letters
Norway/Sweden	9 December 1976	Agreement on fishing
Bulgaria/USA	17 December 1976	Agreement concerning fisheries off the coasts of the United States with agreed minutes and related letters
Finland/Norway	29 december 1976	Fisheries agreement
Brazil/USA	30 December 1976	Agreement extending the agreement of 14 March 1975 concerning shrimp
Korea, Rep./USA	4 January 1977	Agreement concerning fisheries off the coasts of the United States with agreed minutes and exchange of notes
France/Guinea Bissau	20 January 1977	Fishery agreement
Ivory Coast/Senegal	26 January 1977	Agreement in the field of marine fisheries
German, Dem.Rep./ Norway	28 January 1977	Fisheries agreement
Norway/Portugal	8 February 1977	Fisheries agreement
Japan/USA	10 February 1977	Agreement concerning fisheries off the coasts of the United States
EEC/USA	15 February 1977	Agreement concerning fisheries off the coasts of the United States
Spain/USA	16 February 1977	Agreement concerning fisheries off the coasts of the United States
Denmark (Faroes)/ Norway	21 February 1977	Agreement on mutual fishing rights
Denmark (Faroes)/ Sweden	22 February 1977	Fishery agreement
Canada/USA	24 February 1977	Reciprocal fisheries agreement
Angola/USSR	March 1977	Protocol on cooperation in fisheries
Mauritania/Nigeria	14 March 1977	Protocol of agreement on fisheries

EEC/Denmark (Faroes)	15 March 1977	Agreement concerning fisheries
Colombia/Costa Rica	17 March 1977	Agreement on marine cooperation
Mozambique/Spain (Pescanova)	20 March 1977	Fisheries Agreement
EEC/Sweden	21 March 1977	Agreement on fisheries
Denmark (Faroes)/ USSR	April 1977	Proces verbal on temporary mutual fishing rights
Greece/Mauritania	1 April 1977	Agreement on fishery cooperation
Norway/Spain	15 April 1977	Fisheries Agreement
Iceland/USSR	25 April 1977	Agreement on scientific cooperation and consultation in the field of fisheries and research with respect to the living resources of the sea
Cuba/USA	27 April 1977	Agreement concerning fisheries off the coasts of the United States with annexes agreed minutes and related notes
Brazil/USA	1 May 1977	Agreement concerning shrimp
Iran/Korea, Rep.	11 May 1977	Agreement on fisheries cooperation
Canada/Cuba	12 May 1977	Agreement on mutual fisheries relations
Guinea Bissau/ Portugal	20 May 1977	Agreement on cooperation in fisheries
Egypt (Société égyptienne des pêches en haute mer)/ Mauritania	22 May 1977	Agreement on fisheries
Japan/USSR	22 May 1977	Agreement concerning fisheries in waters off the Union of the Soviet Socialist Republics coast in the Northeast Pacific Ocean
Norway/Poland	24 May 1977	Fisheries agreement
Canada/Romania	9 June 1977	Agreement on mutual fisheries relations
Japan (Japanese Deep Sea Trawler Association)/ Mauritania	22 June 1977	Contract on fishing
Libya/Mauritania	26 June 1977	Agreement on cooperation in the field of marine fishing
UK/USA	24 June 1977	Reciprocal fisheries agreement
Japan/USSR	4 August 1977	Agreement concerning fisheries in waters off the coast of Japan
Mexico/USA	26 August 1977	Agreement concerning fisheries off the United States

Guinea/Italy (Amopesca)	31 August 1977	Protocol of agreement relating to the exploitation of fishing resources of the Republic of Guinea
Denmark (Faroes)/ USA	5 September 1977	Agreement concerning fisheries off the coasts of the Unitd States with Annexes
Canada/German Dem.Rep.	9 September 1977	Agreement on mutual fisheries relations
Bulgaria/Canada	27 September 1977	Agreement on mutual fisheries relations
Norway/USSR	20 October 1977	Agreement on catch quotas in the Barents Sea
Mauritania/Spain	26 October 1977	Protocol of agreement on fisheries cooperation
Guinea/Libya	19 November 1977	Agreement concerning the establishment of a fishery joint venture
Denmark (Faroes)/ USSR	27 November 1977	Agreement regarding mutual fisheries relations
Japan/South Africa	6 December 1977	Fishery Agreement
Denmark (Faroes)/ Norway	7 December 1977	Agreement on reciprocal fishing rights
Ivory Coast (Compagnie africaine de pêche atlantique)/ Mauritania	7 December 1977	Protocol of agreement
Iceland/Denmark (Faroes)	12 December 1977	Fishery agreement
Venezuela/Trinidad and Tobago	12 December 1977	Fishery agreement
Japan/USSR	16 December 1977	Protocol amending and extending the Conventions of 27 May 1977 and of 4 August 1977
German Dem.Rep./ Sweden	16 December 1977	Agreement on Fisheries
Sweden/USSR	22 December 1977	Fishery agreement
Poland/USSR	1978	Agreement on fishing cooperation (Baltic Sea)
Poland/USSR	1978	Agreement on fishing cooperation (Barents Sea)
Norway/USSR	11 January 1978	Provisional agreement on the delimitation in the Barents sea
Barbados/Brazil	15 February 1978	Agreement concerning joint ventures in the fishing sector
Angola/USSR	March 1978	Protocol of agreement on fisheries
Mauritanit/Morocco	1 March 1978	Protocol implementing the agreements on fisheries cooperation

Korea, Rep./New Zealand	15 March 1978	Fisheries agreement
Guinea-Bissau/Italy (Federpesca)	15 March 1978	Fisheries agreement
Japan/Portugal	18 March 1978	Agreement on fisheries
Bangladesh/Thailand	25 March 1978	Agreement on cooperation in fisheries
Mauritania/USSR	April 1978	Provisional protocol
New Zealand/USSR	4 April 1978	Agreement on fisheries
Canada/USA	10 & 11 April 1978	Interim reciprocal fisheries agreement
Japan/USSR	21 April 1978	Convention on cooperation in the field of fisheries
Japan/USSR	21 April 1978	Protocol relating to salmon-trout fishery
Argentina/Germany, Fed.Rep.	24 April 1978	Agreement on fisheries cooperation
Morocco/USSR	27 April 1978	Fishery agreement
Canada/Japan	28 April 1978	Agreement on fisheries
Brazil/Trinidad and Tobago	8 May 1978	Agreement concerning joint ventures in the fishing sector
Guinea/Libya	29 May 1978	Agreement laying down the statutes of Sogualip (Guinean/Libyan joint venture)
Seychelles/USSR	23 June 1978	Agreement on cooperation in the field of fisheries
Mauritania/USSR	26 June 1978	Agreement on cooperation in the field of fisheries with protocol of application
Gilbert Islands/ Japan	26 June 1978	Agreement concerning fisheries off the coasts of Gilber Islands
Kiribati/Korea, Rep.	28 June 1978	Agreement concerning fisheries off the coasts of the Republic of Kiribati
Gilbert Islands/ Japan (Federation of Japan Tuna Fisheries Cooperative Associations)	30 June 1978	Agreement concerning the licensing of Japanese fishing vessels to fish within the fishery limits of the Gilbert Islands
Greece (Union des Armateurs Grecs)/ Guinea	8 August 1978	Agreement on cooperation in the field of marine fishing
Libya/Mauritania	18 August 1978	Agreement establishing the "Société miexte arabo-libyenne mauritanienne de pêche maritime"
Ghana/Guinea	18 August 1978	Agreement on cooperation in the exploitation of fishery resources

New Zealand/USA (Van Camp)	September 1978	Fishing agreement
Japan/New Zealand	1 September 1978	Agreement on fisheries
Iraq/Mauritania	7 September 1978	Agreement on fisheries
Japan/Solomon Isl.	20 September 1978	Agreement on fisheries
Japan (Federation of Japan Tuna Fisheries, Cooperative Association and the Federation of Fisheries Cooperative Associations of Japan)/ Solomon Islands	20 September 1978	Agreement concerning the issue of permits to Japanese fishing vessels to fish within the fishery limits of Solomon Islands
Barbados/Guyana	2 October 1978	Agreement concerning fishing in the fisheries zone of Guyana
Japan/Portugal	17 October 1978	Agreement on fisheries
Greece/Guinea	26 October 1978	Protocol of agreement on cooperation in the field of marine fishing
Cuba/Guyana	1 November 1978	Fishery agreement
Guinea/Korea, Rep. (Dai Ho Company)	14 December 1978	Agreement on fisheries cooperation
Japan/USSR	15 December 1978	Protocol amending and extending the conventions of 27 May 1977 and of 4 August 1977
Mauritania/Spain	6 January 1979	Annex on fishing
Mauritania/Morocco	13 January 1979	Protocol of agreement in the field of fisheries
Greece/Guinea	14 February 1979	Agreement on cooperation in the field of marine fisheries
Portugal/Spain	13 March 1979	Fishing agreement
France (Armateurs langoustiers français)/ Mauritania	27 March 1979	Convention on fishing
UK/USA	27 March 1979	Reciprocal fisheries agreement
Canada/USA	29 March 1979	Protocol amending the convention for the preservation of the halibut fisheries of the northern Pacific Ocean and Bering Sea (with Annex)
Canada/USA	29 March 1979	Agreement effected by exchange of notes on the preservation of halibut fishery of northern Pacific Ocean and Bering Sea and Fishing off west coast of Canada
Guyana/Suriname	29 March 1979	Agreement on reciprocal fishing relations (with annexes)
France (Cooperative Lagun Artean)/ Mauritania	5 April 1979	Protocol of agreement

Angola/USSR	6 April 1979	Protocol of agreement
Japan/USSR	21 April 1979	Protocol relating to salmon trout fishery
Mauritania/Sweden (Joint Trawlers Ltd)	23 May 1979	Protocol of agreement
Canada/EEC	28 June 1979	Agreement on fisheries
Morocco/Spain	29 June 1979	Provisional protocol on fishing
Japan (Federation of Japan Tuna Fisheries Cooperative Associations)/Kiribati	June 1979	Agreement concerning the licensing of Japanese fishing vessels to fish within the fishery limits of the Republic of Kiribati
Norway/USSR	July 1979	Exchange of letters extending the provisional agreement on the delimitation of the Barents Sea
USSR/Vietnam	5 July 1979	Protocol on fishing
Korea, Rep. (Atlantic Industry Co.)/Mauritania	4 August 1979	Contract on fishing
South Africa/Spain	14 August 1979	Agreement on fisheries
Portugal/Spain	September 1979	Provisional fishing agreement
Japan (Federation of Japan Tuna Fisheries Cooperative Associations and the National Federation of Fisheries Cooperative Associations of Japan)/Solomon Islands	September 1979	Agreement concerning the issue of permits to Japanese fishing vessels to fish within the fishery limits of Solomon Islands
Greece (Union des des Armateurs Grecs de pêche Atlantique)/ Guinea	7 September 1979	Protocol of agreement
Ghana (Mankoaze)/ Guinea	7 October 1979	Agreement concerning maritime fishing off the Guinean coast
Australia/Japan	17 October 1979	Agreement on fisheries
Australia/Japan	17 October 1979	Subsidiary agreement concerning tuna long line fishing
Iraq/Mauritania	26 October 1979	Convention establishing the "Société arabe de pêche mauritano-irakienne"
Portugal/Sao Tome and Principe	27 October 1979	Agreement on fisheries cooperation
Equatorial Guinea/ Spain	31 October 1979	Agreement on cooperation in the field of marine fisheries

EEC/Sweden	21 November 1979	Agreement on certain measures for the purpose of promoting the reproduction of salmon in the Baltic Sea
Senegal/Spain	6 December 1979	Agreement in the field of marine fisheries
Japan/USSR	15 December 1979	Protocol amending and extending the Conventions of 27 May 1977 and of 4 August 1979
Japan (Federation of Japan Tuna Fisheries Cooperative Associations, the National Federation of Fisheries Cooperative Associations and the Far Seas Purse Seine Fishing Association)/ Micronesia	22 December 1979	Agreement concerning the supply of goods and services for the development of the Federated States of Micronesia
Japan (Federation of Japan Tuna Fisheries Cooperative Associations, the National Federation of Fisheries Cooperative Associations and the Far Seas Purse Seine Fishing Association)/ Micronesia	22 December 1979	Fishing agreement
Morocco/Spain	29 December 1979	Fishing agreement
Japan (Associations) /Papua New Guinea	end of 1979	Arrangement concerning fishing within the fishing zone under the jurisdiction of Papua New Guinea
Japan/Palau	end of 1979	Fishing agreement
Iceland/Denmark (Faroes)	1980	Agreement on reciprocal fishing rights
Korea, Peop.Dem.Rep. /USSR	January 1980	Protocol on fisheries cooperation
Korea, Rep./ Solomon Islands	January 1980	Agreement on fisheries cooperation
Portugal/Spain	February 1980	Fishing agreement
Italy/Yugoslavia	12 March and 27 June 1980	Exchange of notes extending the agreement of 15 June 1973
Japan/France	March/April 1980	Agreement on fisheries
Japan/Palau	March/April 1980	Agreement on fisheries
Japan (Associations) /Micronesia	March/April 1980	Agreement on fisheries
Angola/USSR	April 1980	Protocol on fisheries cooperation

Cape Verde/Portugal	April 1980	Agreement on fisheries
Guinea/Italy (Amopesca)	1 April 1980	Agreement concerning fishing off the Guinean coasts
Mauritania/Senegal	17 April 1980	Procèes-verbal on fishing
Japan/USSR	20 April 1980	Protocol relating to salmon-trout fisheries
Iraq/Seychelles	29 April 1980	Agreement relating to fisheries
Iceland/Norway	28 May 1980	Agreement on fishery and continental shelf matters (Jan Mayen)
Angola/Spain	11 June 1980	Fishery agreement (with annexes)
Korea, Rep./Tuvalu	18 June 1980	Fisheries agreement
Canada/EEC	27 June 1980	Agreement in the form of an exchange of letters concerning the extension of the agreement on fisheries
Canada/EEC	27 June 1980	Agreement in the form of an exchange of notes concerning salmon fishing
Morocco/Spain	30 June 1980	Exchange of letters on fishing
Korea, Rep. (Deep Sea Fisheries Association of the Republic of Korea)/Tuvalu	August 1980	Agreement concerning the licensing of fishing vessels of the Republic of Korea to fish within the fishery limits of Tuvalu
Cook Islands/ Korea, Rep.	August 1980	Agreement concerning the licensing of fishing vessels to fish within the Cook Islands Exclusive Economic Zone
Cook Islands/ Korea, Rep.	25 August 1980	Agreement on fisheries
Maritime Authorities of Micronesia/USA (American Tuna Boat Association)	5 September 1980	Agreement
Japan (Federation of Japan Tuna Fisheries Cooperative Associations and the National Federation of Fisheries Cooperative Associations	7 September 1980	Agreement concerning the issue of permits to Japanese fishing vessels to fish within the fishery limits of Solomon Islands
Kiribati/Korea, Rep.	Sept./Oct. 1980	Fishing agreement
France/Korea, Rep.	19 September 1980	Procès verbal concerning an exchange of letters on fishing
Portugal/USA	16 October 1980	Agreement concerning fisheries off the coasts of the United States with annexes
Australia/Japan	30 October 1980	Subsidiary agreement concerning Japanese tuna long-line fishing

Japan (6 private associations)/ Micronesia	5 December 1980	Fishing agreement
Japan (6 private associations)/ Micronesia	5 December 1980	Agreement concerning the supply of goods and services for the development of fisheries of the Federated States of Micronesia
Japan/USSR	6 December 1980	Protocol amending and extending the Conventions of 27 May 1977 and of 4 August 1977
Korea, Rep./Solomon Islands	12 December 1980	Agreement on fisheries with agreed minutes
Indonesia/Papua New Guinea	13 December 1980	Agreement concerning maritime boundaries and cooperation in related matters
Norway/Portugal	23 December 1980	Exchange of notes on fishing
Argentina/USSR	30 December 1980	Protocol of understanding on fishery research
Japan (associations) /Papua New Guinea	end of 1980	Agreement concerning fishing within the fishing zone under the jurisdiction of Papua New Guinea
Norway/Spain	21 January 1981	Fisheries agreement
Palau/USA	26 January 1981	Agreement concerning fisheries off the coasts of the United States
Korea, Rep./ Mauritania	January 1981	Agreement on fishery cooperation
Mauritania/USSR	March 1981	Provisional agreement
Portugal/Spain	March 1981	Provisional agreement on fisheries
Japan (private associations)/ Mauritania	10 March 1981	Fishing agreement
USSR/Yemen, Peop.Dem.Rep.	19 March 1981	Protocol of agreement
Japan/Marshall Islands	25 March 1981	Agreement concerning fisheries off the coasts of the Marshall Islands
Japan (Fisheries Association of Japan)/Palau	25 March 1981	Agreement concerning fishing in the waters of Palau
Morocco/Spain	1 April 1981	Protocol of provisional agreement
Japan/USSR	20 April 1981	Protocol relating to salmon-trout fishery
EEC/Guinea-Bissau		Agreement in the form of an exchange of letters concerning the interim extension of the Protocol annexed to the agreement concerning fishing off the Guinea-Bissau coast. Approved by an EEC Council Decision dated 26 April 1982

Fiji (Ika Corporation)/Tuvalu	19 June 1981	Fishing permit agreement
Japan/France	13 July 1981	Fishing agreement
EEC/Senegal	27 July 1981	Agreement in the form of an exchange of letters concerning an interim extension of the Protocol annexed to the agreement on fishing off the coast of Senegal
Japan (several associations)/ Papua New Guinea	7 August 1981	Arrangement concerning fishing within the fishing zone under the jurisdiction of Papua New Guinea
Portugal/Spain	September 1981	Protocol relating to the implementation of the agreements of 1969 and 1978
Micronesia/USA (American Tuna-Boat Association)	5 September 1981	Amendment Number One to the agreement
Denmark/Norway	7 September 1981	Temporary arrangement
Mauritania/Romania	15 September 1981	Agreement on fishery cooperations
Cape Verde/Spain	25 September 1981	Agreement on cooperation in the field of fisheries
Japan (Federation of Japan Tuna Fisheries Cooperative Associations and the national Federation of Fisheries Cooparative Associations/ Kiribati	October 1981	Agreement concerning the licensing of Japanese fishing vessels to fish within the fishery limits of the Republic of Kiribati
Korea, Rep. (Samyane Enterprise Co. Ltd.)/Micronesia	12 October 1981	Foreign fisheries agreement
Sierra Leone/USSR	13 October 1981	Protocol on fisheries
Korea, Rep. (Deep Sea Fisheries Association of the Republic of Korea)/Tuvalu	25 October 1981	Agreement concerning the licensing of fishing vessels of the Republic of Korea to fish within the fishery limits of Tuvalu
Australia/Japan	29 October 1981	Subsidiary agreement concerning Japanese tuna long line fishing
Norway/USSR	November 1981	Agreement on the division of quotas in the Barents Sea
EEC/Suriname	24 November 1981	Provisional agreement on the issuance of licences to EEC
Cook Islands/Korea, Rep. (Fisheries Associations of the Republic of Korea)	26 November 1981	Agreement concerning the licensing of fishing vessels to fish within the Cook Islands Exclusive Economic Zone

Cameroon/ Equatorial Guinea	26 November 1981	Protocol of agreement
Equatorial Guinea/ Nigeria	27 November 1981	Agreement on fishing rights
France/Korea, Rep.	end November 1981	Fisheries agreement
Japan/USSR	16 December 1981	Protocol amending and extending the Convention of 27 May 1977 and 4 August 1977
EEC/Senegal		Agreement in the form of an exchange of letters providing for provisional application of the agreement amending the agreement on fishing off the coast of Senegal and the protocol thereto. Approved by the EEC Council by a decision of 21 December 1981
Canada/EEC	30 December 1981	Agreement in the form of an exchange of letters concerning fishing relations
USSR/Yemen, Peop.Dem.Rep.	end of 1981	Fishing protocol
Denmark (Faroes)/ German Dem.Rep.	beginning 1982	Fishery agreement
France (Lagun Artean)/Mauritania	January 1982	Agreement
Japan (Fisheries Associations of Japan)/Palau	13 January 1982	Memorandum of agreement extending the agreement concerning fisheries in the waters of Palau of 25 March 1981
EEC/Senegal	21 January 1982	Agreement amending the agreement on fishing off the coast of Senegal signed on 15 June 1979
Korea, Rep. (Sambu Industrial Co. Ltd.)/ Micronesia	12 February 1982	Foreign fishing agreement
Senegal/Spain	16 February 1982	Fisheries agreement
Mauritania/Spain	6 April 1982	Agreement on economic cooperation
Mauritania/Spain	6 April 1982	Agreement on fishing
Papua New Guinea/ USA (American Tuna-Boat Association)	17 March 1982	Fishing agreement
Japan (Federation of Japan Tuna Fisheries Cooperative Associations and the National Federation of Fisheries Cooperative Associations)/ Marshall Islands	23 March 1982	Agreement concerning operations of fishing vessels within the fishery zone of the Marshall Islands

Morocco/Spain	31 March 1982	Exchange of letters extending the protocol of provisional agreement of 1 April 1981
Korea, Rep. (Deep Sea Fisheries Association of the Republic of Korea)/ Solomon Islands	13 April 1982	Agreement concerning the issuance of permits to fishing vessels of the Republic of Korea to fish within the fishery limits of Solomon Islands
Japan (Federation of Japan Tuna Fisheries Cooperative Associations and the National Federation of Fisheries Cooperative Associations)/Micronesia	16 April 1982	Foreign fishing agreement
USA/USSR	22 & 29 April 1982	Exchange of notes extending the agreement concerning fisheries off the coasts of the United States of 26 November 1976
Japan/USSR	23 April 1982	Protocol relating to salmon-trout fishery
Japan/New Zealand	7 May 1982	Exchange of letters extending the agreement on fisheries of 1 September 1978
Denmark (Faroes)/ EEC		Exchange of letters establishing measures for salmon fishing in North Atlantic waters approved by a decision of the EEC Council of 11 May 1982
Spain/USA	30 June & 2 July 1982	Exchange of notes extending the agreement on fishing off the coasts of the United States of 16 February 1977
Korea, Rep./USA	26 July 1982	Agreement concerning fisheries off the coasts of the United States with agreed minutes
Spain/USA	29 July 1982	Agreement concerning fisheries off the coasts of the United States
Korea, Rep./ New Zealand	August 1982	Exchange of notes extending the agreement on fisheries of 16 March 1978
New Zealand/USSR	August 1982	Exchange of notes extending the agreement on fisheries of 4 April 1978
France/USSR	2 August 1982	Fishing agreement
EEC/Guinea	10 August 1982 (initialled on)	Agreement on fishing off the Guinean coast
France/Japan	14 August 1982	Fishing agreement (French Polynesia)
France/Japan	14 August 1982	Fishing agreement (New Caledonia, Wallis and Futuna, Indian Ocean French Territories)
Nigeria/Mauritania	November 1982	Agreement amending the agreement of 14 March 1977
Nigeria/Senegal	8 November 1982	Fishing agreement
Morocco/Spain	31 December 1982	Agreement extending the exchange of letters of 31 March 1982

ANNEX 3

TRENDS AFFECTING THE INTERESTS OF DISTANT-WATER FISHING NATIONS AND OUTLOOK FOR THE FUTURE

by

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Distant-water fishing has been subject to two main criticisms from coastal fishing communities:

- Maintaining an excessive level of exploitation detrimental to less mobile coastal fisheries which do not have alternate deployment opportunities.
- Disregarding the priority rights of the coastal fishermen.

These criticisms were often justified, but it is only fair to add that coastal-based fishermen have, too, overexploited indigeneous stocks. Furthermore, some stocks could not be profitably exploited by local fishermen, whereas distant nations had the catching capability and domestic markets.

The new regime for the sea has institutionalised the rights of the coastal States, to the extent that is is sometimes interpreted as validating property rights for the local fishermen; it has, anyway, required the far-distant fishing nations to seek fishing privileges against fees, or various concessions.

This development is well-known and leads to the question of what kind of a future is to be expected for the far-distant fisheries.

If it is obvious that the survival of far-distant fishing enterpises depends upon access to foreign fishing zones, it should be remembered that it will not be sufficient to obtain quotas and to catch fish. It is often under-emphasized that a profitable industry needs strong links with the market place, and it is too readily assumed that the domestic industry which has inherited the coastal resource will be able to dispose of its production surpluses on the international market.

I. BEFORE THE NEW REGIME

The most publicised type of far-distant exploitation is that of the East European fleets, ready to deploy in all the world's oceans for practically any species of fish with the objective of procuring the maximum quantity of animal protein to supplement an insufficient domestic supply of meat. The consequences of those activities may have been very detrimental to certain shoaling fish stocks, i.e. pelagic species (herring, capelin, mackerel ...) or for haddock which, although a demersal species, presents some shoaling behaviour (eg. the big catches of USSR on the Georges Bank in 1965-66 and in the North Sea in 1976). But for species not so easily harvested in such quantities, this exploitation pattern would still be serious although less critical.

The point to keep in mind is that the means of production in centrally-planned economies, in spite of what has been often said about their lack of profitability, is also, in fact, market orientated. But they emphasise bulk catches because they measure revenues in proteins rather than in dollars, yen or marks, while the fisheries in free-market economies have to ensure profitability in money values.

Other examples will show that industrialised countries, engaged in far-distant fisheries, although they were very often using similar boats and techniques had widely different objectives and organizations. The common points were in the ways with which these objectives were achieved: long voyages to and from the fishing grounds and exploitation of the same fish stocks. But, principally, deployment was a factor of the prevailing market conditions, as were decisions regarding the type of processing undertaken onboard these vessels.

In the North Pacific, Japan was competing with the USSR for Alaska pollack which was processed on board. But whereas the Soviet catches are distributed and defrosted in retail outlets throughout the country, the Japanese public was keen on the roe neglected by many consumers of that kind of gadoid; the fish itself was used for the preparation of kamaboko, a type of fish "paté"; and only relatively small quantities were exported in frozen slabs, mainly to the United States.

The Grand Banks, off the Canadian east coast, were a meeting point for many far-distant fleets. The French, Spaniards and Portuguese had been exploiting those waters for centuries in search of cod which was salted on board. France turned to freezer trawlers with only limited success but had better results when it combined both processes: the salt fish market, in spite of all which was said about its obsolescence, was remaining important, but salting at sea was requiring a relatively large crew at a time when the catches per unit of effort were diminishing. The French catch gradually dwindled so that the country had become a net importer of salted fish before 1977, but the choicest fish were utilized in salting where the returns were greater.

Spain, and even more so Portugal, maintained, for a longer time, their salt fish sector due to a strong internal demand for the product and to an abundance of manpower ready to accept conditions which would not have been accepted in other industrialised countries. This last remark applied mainly to Portugal, where the dory vessels, abandoned by all other European fleets after the Second World War, remained active until the 1970's, due to their higher productivity at a time when the cod stock was dispersed, and perhaps over-exploited, and not so easily fished by the conventional bottom trawl.

Conversely, and at the same time, Spain developed a large and modern fleet of freezer trawlers to catch South Atlantic hake which was frozen whole, carried back to Spain and for which a market was gradually developed in part because of the scarcity of the more appreciated European hake.

German fisheries developed in the west Atlantic when the salt fish trade was beginning to decline. It grew into a complex exploitation, having three alternative targets: herring or redfish, for which the German market was biggest in Europe, or cod which was mostly exported as far away as the US. It is important to note that the crews were composed of a significant number of immigrant workers: the long absences and the harsh conditions of the work were not acceptable to most Germans.

The UK, in spite of a few tentative forays, did not undertake any recent fishing ventures of commercial significance in the waters of the north-west Atlantic. It concentrated on the northern and Arctic waters of the north-east Atlantic (Iceland, the Barents Sea, Spitzbergen and Bear Island). Two reasons may be given. Firstly, the British industry concentrated its efforts on the landings of whole fish which, frozen at sea and defrosted ashore, corresponded to a market in which fish and chip shops had the biggest share. Secondly, the crews were British and not disposed to working on board ships for extended periods with short turnovers between trips. A UK freezer trawler, while remaining at sea for one month, required a crew complement of around half that of German trawlers which remained at sea for more than two months. It was more cost-effective to employ a plant worker ashore than at sea.

As a final example, it is worth noting that the tropical tuna fisheries were pursued by a number of long-distant fleets. Their operations were similar, both in the highly technological sense and also because of the dominant position of the few markets which were importing the bulk of domestic production surpluses: apart from Japan, where the consumption pattern is more diversified, most of the production is utilized for canning.

All in all, the conclusion to be derived from the practice of long-distance fishing before 1977 is to note the importance of the competition which was taking place on the grounds between the different fleets (e.g. Japan and the USSR in the Bering Sea, Japan, USSR, Spain in the south-east Atlantic; USSR, Poland, Spain, Portugal, France and Germany in the north-west Atlantic, etc.).

Because of this competition, production was held at a maximum, i.e., often significantly above the maximum sustainable yield. But this severe competition was not based on equal or equalised economic conditions. If, in many cases, the means and methods of production were similar, the markets and the costs and earnings relationship were widely different. It explains how new kinds of production/market systems, possible in one country, could push out other production/market systems of countries confronted with different national market and economic conditions. To this extent the movement towards the new law of the sea was precipitated by the need to avoid the damaging consequences of excessive competition.

II. THE FIRST YEARS OF THE NEW REGIME

A first consequence of the new regime for fisheries, which was implemented by many countries in 1977, was to give to the coastal States the right of reserving the living resources of their zones to their nationals, i.e., the right of excluding the foreign fleets, most often far-distant fleets. In this respect, the new regime for fisheries was rapidly implemented and, sometimes, with brutal consequences. Whereas the EEC took more than seven years to agree on the internal distribution of the common resources of the North Sea, the exclusion of the Soviet fleets from the North Sea as well as the corresponding exclusion of the EEC fleets from the Barents Sea, took a matter of a few months.

The rapidity of the reallocation processes led to increased expectations of national fishermen and, whether or not the fleets expanded, the control and organisation of national fishermen is, six years hence, a considerable management problem. Meanwhile, foreign activities were very quickly, if not immediately, drastically controlled and supervised.

The general position, all over the world, is that the access of foreign fleets:

(a) should be given only for that part of the resource which cannot be harvested by the national fishermen;

(b) should be conditional: the less developed countries may find in licence fees a source of income; or in joint ventures, the opportunity of soliciting assistance for the development of their domestic fisheries; the industrialised countries are looking for either a compensation of the costs of control and management in their zones or for commercial concessions for their exports.

In other words, the countries which were active in far-distant fishing operations are confronted with:

(a) significant increases in costs: those resulting from the new regime of the sea (fees, etc.); those which are the effects of the economic situation (fuel costs, etc.);

(b) significant decreases in fishing opportunities.

Their situation in recent years was so difficult that there was obviously no consideration of undertaking new investments and that even deployment of the existing fleet on what were traditional fishing grounds, could not be secured. In such situations, profitable exploitation was no longer possible; owners could only hope to minimize losses through solutions more unsatisfactory than satisfactory.

It is, in fact, impossible to give a comprehensive account of the many existing situations. Many joint ventures or fishing agreements, even when they are concluded after various public sector interventions and conditions, are considered as private business and therefore not open to scrutiny. Where information is given, e.g., in specialised journals, it is rarely complete and does not present a full picture. Furthermore, the conditions are changing rather rapidly and much of the available information is, in fact, outdated shortly after is it disseminated.

Consequently, if the information given in Part I was a series of summaries of the situations of the different far-distant fleets, Part II can only present a set of examples without the possibility of comprehensive assessment.

(a) The first reaction has been to deploy, wherever opportunities were still available: large freezer trawlers have been sent to far-distant shrimp grounds; boats made for the north Atlantic have been sent to the Antarctic for new species hitherto unknown to the fishermen or to the consumers; once again the millions of tons of krill have been publicised as if they were to be harvested, in a normal commercial manner, before the end of the year; the same is true for blue whiting and many hake species. But, the number of under-exploited resources, anywhere in the oceans, has quickly disappeared and the hopes of overcoming technological or marketing difficulties for new products have regularly taken much more time to materialise than was expected.

As the situation has materialised, the best deployment possibilities were inside the regulatory frameworks built up by the different coastal States having, in their zones, resources that they could not readily or easily exploit.

(b) Factory vessels or freezer trawlers used as floating plants: this has taken the form of experimental short-term joint ventures, the idea being for the coastal State to test the viability of such an occupation in remote areas and to buy similar vessels in the case of favourable results. A different situation was created when foreign factory vessels were used as "landing" stations for local boats: it was then an export made directly "over-the-side". And the procedure has even been simplified, avoiding transshipments, often impossible at sea, by the transfer of the cod ends from the catchers to the foreign factory vessel. Finally, in between the two extremes, the factory on board the vessel was placed at the disposal of the coastal State and/or for the use of the foreign importers. Various systems for the sharing of the processed catches have been put into practice because the far-distant fleets usually belong to countries having an important domestic market to supply.

(c) Fishing rights and joint ventures: the case of non-reciprocal fishing rights being granted by a coastal State to foreign vessels is so rare that it can be overlooked.

Joint ventures, on the other hand, are common, and it is impossible to give a comprehensive review of all types of deployment. Apart from the special case referred to in (b) above, the following are worthy of mention.

- Change of flag of large vessels to be operated directly from the coastal State; there may be associated shore investments in which case the catch would be processed by the coastal State for transshipment to traditional markets which are most likely located in the joint venture partner's State. A whole range of options are available, but these arrangements tend to be confined to far-distant industrialised countries and less developed coastal States.

- Access to coastal State fishing grounds in return for market concessions; the partners are most likely to be industrialised countries.

- Feasibility fishing arrangements, which are now becoming less common as the extent of the domestic resources are better understood.

(d) Finally, the exchange of quotas by neighbouring coastal States, whether or not the exchange refers to transboundary stocks, is the basis for agreement. The rationale for such an exchange would lie in divergent national objectives.

The wide range of existing situations and the necessity of finding resources for so many far-distant vessels, make it very difficult to formulate an economic assessment. The only clear fact is rather negative: it is only for tuna that new far-distant vessels were ordered and the recent developments in the markets for tuna (end of 1982-beginning of 1983) would not encourage new orders when it is no longer kown if these ships, ordered but not as yet launched, will be viable.

A remark can be made about the market side of the problem, but before doing so, it is worth remembering that around 12 million tons of fish, most of which was for human consumption, was harvested from "foreign waters" at a time when the world catch for human consumption was around 45 million tons.

Those products which are the most common landings of far-distant vessels, i.e. frozen fillets of demersal fish, have, over the last two to three years, been faced with stagnating prices, which means decreasing prices when taking inflation into account. Conversely, it is a well-known fact that costs, and fuel is a very important one, have increased at a faster rate than inflation. When it is recalled that some far-distant fleets of the European countries were already close to, or below, the break-even point in the early 1970's, without those new burdens, it is questionable that their operation would be profitable today. The problem is perhaps academic in the absence of new investments.

III. FUTURE FAR-DISTANT ACTIVITIES

In a simple economic model, far-distant operations will appear to be more costly than coastal operations: the space reserved on board for processing is significantly more expensive than shore-based processing facilities; the manpower will also be significantly more costly; and the costs associated with getting to and from the fishing grounds are considerable. But it is true that this cost/benefit reasoning was as valid before the new regime and did not impede the development of the far-distant fisheries.

The economic justification for far-distant fisheries was the creation of a favourable relationship between production and the market which benefited far-distant fisheries vis-a-vis coastal fisheries, or some far-distant fisheries vis-a-vis other far-distant operations.

The new regime for the sea effaced this economic rationale because of the protection given by the coastal State to its coastal fishermen, a protection which can take two different forms:

- A negative one by fees and other special conditions which are imposed on foreign fleets and are limiting their possibilities and adding to their costs.

- A positive one, by various direct or indirect aids given by the coastal State to its own fishermen and somewhat distorting the competition on the markets: such a distorting effect may only affect the international trade but in view of the importance of international trade in fisheries, it concerns all fishing countries.

Because of this protection, which varies from one country to another but with a tendency to increased protection, the former economic justification for far-distant fisheries, i.e. the relationship between production and the market, can be recreated.

Before examining the problem from the international stand-point, it is of interest to point out that the problem can also be found in the national framework.

(a) "National" far-distant fleets

The size of a country such as the USSR and the structure of its fleet make it obvious that any change in the deployment of the fleets implies far-distant activities. But there are other cases such as the heritage of colonisation. France, which claims to have the third largest fishing zone in the world, has made trials with large freezer trawlers sent to the Kerguelen Islands: the additional costs for the distance and the marketing of unknown species rendered the venture, at least until now, non-profitable. Using the same kind of jurisdictional facilities, a partial deployment of the French tuna fleet in the waters around New Caledonia was envisaged, but it did not materialise because the tuna fleet could still find profitable grounds off the West African coast while the freezer trawlers were laid-up.

Other examples are not so extreme, but, nevertheless, clear. It seems that the development of the Alaskan fisheries is easier with boats based at Seattle, than with boats based in Alaska. The operations may be mixed, with boats provisionally based for the fishing season in Alaskan ports and returning south for refitting only. But there are also projects of factory vessels, which would undertake the first processing, so avoiding landings in Alaska. If such projects are to be successful (Alaska pollack must be processed shortly after being caught) they will represent an obvious case of national far-distant fisheries.

More generally there is often, within the national fishery, conflicting interests between coastal boats and larger vessels which are only equipped for gutting, icing and boxing on board, but which can stay at sea for a week or more. The difference in time at sea and the distances covered make it that one cannot speak of those operations as being far-distant; it is only middlewater. But the coastal fishermen can be more adverse to middle-water operations, the competition of which could be more direct. This is particularly the case in the Atlantic waters off Canada and in the North Sea. It shows that the spatial limits between far-distant fisheries and other fisheries cannot be established arbitrarily.

(b) International far-distant fisheries

It is most probable that far-distant operations inside national EEZ's will continue for the same reasons and in ways similar to those existing before the new regime for the sea. The economic and technological conditions, and indeed the demand for fish products, are so widely different that the coastal States cannot expect to enjoy comparative advantages in all that concerns their domestic resources. It is therefore likely that resources available in the relatively large quantities will be subject to bargaining between coastal States and far-distant "hungry" countries, even if this kind of operation will be less common than in the regime for free access.

Having said this, it remains difficult to tender a forecast as developments in fish production and consumption are highly correlated to general economic development. Suffice to say that the coastal States will have the means of exploiting "their" fish resources and the markets to absorb this production in times of economic growth, and much less so when their economy is stagnating.

(c) The **future?**

If the future cannot be known, it can be imagined and if Utopian futures are too often imagined it is one more reason to propose futures somewhat more logical and beneficial than the present situations, especially when they are implied by recent developments.

The prejudice, or hypothesis, on which this section is based is that past and present far-distant fishing operations can ony have a limited future in as much as they are based on bulk catches at one end and mass-produced fast-food outlets at the other end, i.e., on a kind of activity which cannot be further developed, for two reasons: the resources of the sea are limited, and the price that this particular market can offer is limited by the price of other food items for which mass-production is significantly easier.

The only solution which could help towards overcoming the two above-mentioned limiting factors is to recreate a direct and more favourable relationship between the production and the market.

Let us examine the example of the Bering Sea, and list the possible alternative solutions for exploiting the main resources of the area accessible to far-distant operations as opposed to the coastal fleets which would supply plants ashore.

1. Coastal fleets, which may come from relatively closely based ports (Seattle) supplying foreign factory vessels.
2. Coastal fleets (as above) supplying domestic factory trawlers.
3. Allocation of quotas to foreign fleets.

Translating those possibilities into catches taken by individual countries, another classification has to be adopted:

1. The above 1. and 2. should be combined to supply the US market for blocks of frozen fish.
2. The above 3. should be broken down to supply the Japanese market for Alaska pollack roe and Kamaboko ...
3. And the Soviet market for frozen fish (whether Alaska pollack or other species, is not the main problem) to be defrosted on the counter in retail fish shops.

Each of the main countries involved considers the best interest of its fishing industry; the agreement or decision finally adopted is a compromise, more or less favourable, to the different partners in the bargaining game. In other words the liaison between production and the markets is resolved by the individual nations. There is no global strategy for deciding what combination of these different production/market systems would lead to an optimisation of benefits.

Further developments in the area would have to consider more carefully the advantage of, e.g., the Japanese markets for Alask pollack roe, but no result could be assessed without a parallel study of the frozen fish slabs in the US which would involve the Atlantic cod problem, etc. In fisheries, few problems can be isolated and world-wide repercussions are a usual feature. But this raises problems which go further than the far-distant fisheries question.

The main motivating factor behind the new regime of the sea was that it would be necessary for ensuring the protection of the common heritage of mankind. If the implementation of such a noble principle leads to the scrapping of boats which are still operational, even if it is a loss borne by one nation only, it cannot be considered as good management of the world resources. Furthermore, and economically more important, if the value of the common heritage is, as regards the living resources of the sea, assessed at the landing stage without any consideration of the processing and marketing chain, it excluded the largest part of the added-value generated by the fishing industries taken as a whole.

The responsibility of surveying and managing the fish resources within the 200-mile zone has been institutionalised by most, if not all, the world's coastal States. It is also recognized that the fish resources transcend State boundaries, consequently scientific research and the rule for management cannot be optimally managed by the coastal States in isolation. International cooperation, either by bilateral contacts or through various multilateral procedures, are indispensable. Although the progress made along such lines is not spectacular, the corresponding bureaucracies are gradually moving ahead.

Marketing problems are also international but cannot be treated in the same manner. Cooperation in market field is, by nature, entirely left to the initiative of the individual country and to the dynamism of the fishing industries.

The international markets for mass-produced fish-food are not at present giving a sufficient remuneration to the producers. And no trade or production measures would be likely to improve the situation as long as the price trends are bound to food items which do not bear the same kind of costs and which are not limited in quantity as fish is by the state of the resources. The solution to this difficult problem can only be in more diversification through a better adaptation of the production to the various markets. it is most likely that to cover such an objective, far-distant operations which have pioneered the fish production revolution, would again have a role to play. But the question arises whether the present management systems are ready to entertain a global approach which cannot be the result of a bureaucratic organization but should take its origin from better contacts between all professionals concerned.

ANNEX 4

CONDITIONS OF ACCESS TO FISHERIES: SOME RESOURCE CONSIDERATIONS

by

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1. INTRODUCTION

Under the new Law of the Sea coastal states are given a high degree of control over the fishery resources lying in the Exclusive Economic Zone, out to a distance of 200 miles. However this control is not absolute. In particular the draft treaty implies that if the resources are large compared with the capacity of the coastal state to harvest them, then fishermen of other countries should, under certain conditions, be given access to these under-utilized resources. The nature of these conditions is a matter of concern to many countries, both coastal states and those with distant-water fishing capacity, and can be considered from different view-points - legal, economic, social, etc. This note concentrates on the resource aspects, particularly from the view-point of the coastal state. These will be dealt with in two major sections - the nature and definition of any possible surplus to which other countries should be given access and the costs, direct and indirect, of giving access.

2. THE CONCEPT OF A SURPLUS

The principle that, under certain conditions, foreign fishermen should be given access to resources as it has become established in the draft Law of the Sea is the result of the interplay of many arguments and considerations, among which biological factors played at most a small part. However, the basic biological argument is apparently straightforward, and is based on a few simple points:

(a) It will be assumed that there is a maximum sustainable yield (MSY) which can be taken from any stock, and this yield, and the population level which will produce it can with appropriate research be estimated.

(b) This MSY may be modified by economic considerations, as well as by environmental factors.

(c) The coastal state shall determine the allowable catch.

(d) If this TAC is greater than the amount the coastal state can catch, the difference is a surplus, which can be allocated to foreign fishermen.

Taken together these points might be taken to imply that the surplus - to which foreign vessels should be given access - is equal to the MSY less the catch taken by the coastal state. This does not in fact seem to be the intent of the LOS text, nor would it be a rational approach to management of fish stocks in the light of what is known about the dynamics of fish stocks, and the economics of fishing.

So far as the draft text of the LOS treaty is concerned the two concepts (allowable catch, and MSY) are kept distinct. The relevant paragraph (Article 61(1)) simply calls on the coastal state to determine the allowable catch. There is no explicit guidance as to how this allowable catch should be calculated. It is implied in the later paragraphs of Article 61, and in Article 62 that such calculation would be based on a balance of the interests of conservation and utilization.

Article 61(3), which is where MSY is mentioned, is concerned with keeping the population at a level which can produce the MSY. This condition is satisfied by a range of population sizes, the upper limit of the range being the maximum population size, set by the carrying capacity of the environment. At the lower end of this range, harvesting the MSY will, according to the simple population models, leave the population at this same level (the MSY level). At higher levels continued harvesting of the MSY is possible, and will cause the population abundance to decrease until it reaches the MSY level. Sustained harvesting from population in this range at any rate less than the MSY will cause the population to stabilize at some point in the range, and any such harvests would seem to be consistent with the terms of this Article of the draft treaty.

There seems, therefore, no reason, so far as the Law of the Sea is concerned, for the allowable catch to be set at, or even close to, the MSY (always assuming that such a quantity can be defined and measured). However, the concept of MSY is wide when considering management, and the setting of allowable catches, and it is worth considering it in more detail.

The concept of MSY has been subject to frequent attacks (e.g., Larkin, 1977). Many of these are economic or social in nature, but there are also biological objections. The principal ones are (i) there are natural fluctuations in the abundance and productivity of many stocks, unrelated to fishing, (ii) the yield that can be taken from a stock varies with the pattern of fishing (ages and sizes of fish caught), and (iii) the possible yield from one stock depends on events on other related stocks (e.g., of species that feed on the first species), including any exploitation of those stocks. Thus it is not possible to determine a unique and constant value of the MSY from a stock. The catch that may, in biological terms, be taken will vary from year to year, depending inter alia on the natural conditions in that year (e.g., occurrence of a good year-class), the sizes of fish being harvested, and fishing and other events in related stocks. Some, though not all, of the complications are dealt with by talking about MSAY, i.e., the Maximum Sustainable Average Yield, which would be the greatest yield that could be taken under average conditions.

Modification of the MSY in the light of economic factors, as mentioned in Article 61(3), is a curious concept. The MSY, to the extent that it exists, is a biological entity determined by the nature of the fish stock and its physical and biological environment, and will not be affected by the economic factors affecting the fishery. What is presumably meant by this concept is the modification of the target or allowable catch to a figure that is different from (and therefore less than) the MSY. The need for such a modification arises from the fact that, as pointed out in the frequent criticisms of the MSY concept by economists, the economic and social benefits from a pattern of fishing that takes the MSY will be generally less, and often much less, than those from alternative patterns involving a lower amount of fishing. The benefits from fishing at a level less than that giving the MSY include lower total costs, greater catch rates for the individual fishermen, reduced year-to-year variability in catches, and greater stability of the fish stocks. The benefits generated will be of different types, and each type of benefit will, in general, require a different fishing pattern to be maximized. For example, keeping the catch rates of individual fishermen high (e.g., not less than the level required to give them a reasonable net income) will require a lower amount of fishing than maximizing the number of fishermen employed. There is therefore no unique pattern of fishing which, for a given stock, can a priori be considered optimal. However, if the national objectives are defined, and the balance between them established, then it is, in principle, possible to establish the optimal fishing pattern appropriate to those objectives. These could well change over the year as national policies or other factors, e.g., fuel prices, change. In any given year this optimal pattern (amount of fishing, sizes of fish caught, etc.) will produce a certain catch. This catch should maximize benefits (including future benefits, appropriately discounted), and could be considered the target, or allowable catch in the sense of the Law of the Sea discussion.

The most serious difficulty in the simple argument to establish a "surplus" is the implication in the fourth step ((d) above) that if the catch that would be taken by the coastal state, with its existing capacity is less than the target allowable catch, then the difference - "surplus" - can be taken without affecting the existing coastal state fishery. This is seldom the case 1/. Any fishing by foreign vessels,

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1/ There are exceptions. The commonest is when species taken by the foreign fleet is not harvested at all by the local fishermen. Generally in these cases there is little or no impact on local catches, but if there is an interaction with the locally caught species, there can be some effect. This may even be beneficial, if the species caught by foreign vessels preys on the locally caught species.

carried out in addition to fishing on the same stock by the coastal state, will reduce the abundance of the stock. This reduction will tend to reduce the catches by the coastal state, or require it to increase the amount of fishing (and hence costs) if it is to maintain its catch. In either case the benefits to the coastal state from the resources off its coasts will be reduced. The pattern of fishing is therefore on the arguments of the previous paragraphs, sub-optimal, at least to the coastal state. A surplus therefore does not exist.

This argument ignores the possible benefits that the coastal state might get from the foreign fishery. It is now usually the practice for the coastal state to extract benefits of one kind or another from foreign fleets fishing off its coast. These benefits include direct payment of licence fees, supply of a certain proportion of the catch to local markets, assistance from the foreign country in training, etc., and others. If these direct benefits exceed the costs and reduced benefits to the local fishermen, then the overall benefit to the coastal state from the resource will be increased. In that case the "surplus" might be defined as the amount taken by the foreign vessels when the total benefits to the coastal state (however this is measured) are greatest.

Both the benefits and costs to the coastal state will be affected by the conditions of access (e.g., level of licence fees paid, location of foreign fishing relative to local fisheries, etc.). Thus the calculation of a surplus, and the determination of the conditions of access are not independent processes. The magnitude, and indeed the existence, of a "surplus", in the sense used here, depends on the degree to which the coastal state can devise conditions which will increase its net benefits, either from limiting the costs, or increasing the gross benefits.

It may be argued that, in determining the optimum level of exploitation, the quantity to be maximized should be the total net benefits to the world community, including both the coastal state, and other states whose fishermen might be granted access. This would be expected to result in a different and somewhat more intense pattern of fishing than that maximizing the net benefits to the coastal state alone. However, the difference may not in practice be large. It would clearly be unreasonable for the coastal state to agree to a state of affairs in which the distant water fishermen receive considerable benefits, while the coastal state is worse off than it would be if there were no non-local fishery. (This would be particularly true if the coastal state were a developing country, and the distant water vessels came from a rich developed country). Thus, to be feasible, any pattern of fishing must take account of the costs and benefits to the coastal state. Conversely a pattern of fishing to maximize benefits to the coastal state which involves non-local fishing, is only realistic if sufficient benefits are generated also for the non-local fishing vessels.

3. COSTS

3.1 Losses to existing fisheries

The most significant costs of any foreign fishery are likely to be the impact on the local fisheries, particularly, though not solely, through reduced stock abundance. There are, however, significant other costs. The draft Law of the Sea Convention gives the coastal state obligations as well as privileges, and the former include ensuring management and conservation of the resources. This obligation will involve costs in research, and probably in implementation and control of any management measures.

The costs imposed on a local fishery by the addition of a foreign fleet are illustrated in Figure 1. This shows a typical yield curve, relating the amount of fishing (fishing effort) to the average yield which would be obtained if that effort were maintained over a period. The present local fishery is indicated by the point A, with average annual yield of 50 000 tons. Since the maximum yield is well over 100,000 tons it might seem reasonable to allow access to foreign fleets to take 50,000 tons.

What would happen then will depend on the reaction of the local fleets, and on the conditions of access (whether measured as catch or effort). What is most unlikely to happen is that the local fleet will continue to catch 50 000 tons, and the foreign fleet takes the same. A doubling of total catch to 100 000 tons (i.e., to the point A_2) will require that the total effort is much more than doubled (from F_1 to F_2, i.e., from 32 to 120 units). If this were to happen, and the local fleet were to maintain its catch at 50,000 tons, it would have to increase its effort from 32 to 60 units (i.e., half the increased total effort). This would seem unlikely when one of the basic assumptions is that the capacity of the local fishery is limited. In any case such an increase in effort would involve an increase in costs.

A much more likely event would be that the foreign fleet takes 50,000 tons, and the local fleet maintains its effort at 32 units. This would increase the total effort (to F_3) and the total catch (to A_3). However, because of the fall in catch per unit effort, the catches by the local fleet would fall (to C). In the example illustrated, this means a fall from 50,000 tons to about 35,000 tons. That is the loss to the local fishery as a result of allowing access by foreign fleets is some 15,000 tons.

In the simplest case, as represented by the preceding example, where two fleets operate on the same stock, and take the same sizes and condition of fish, the impact of foreign fishing will be given directly by the marginal efficiency, in the sense of Gulland (1968), that is the proportion of the catch taken by additional fishing effort (in this case the foreign fleet) which represents real additions to the total catch rather than from reductions in catches from existing vessels. Figure 2 shows how this marginal efficiency decreases as the total catch (expressed as a percentage of "MSY") increases. The curves correspond to different assumptions about the biological characteristics of the stocks and the nature of the model used in assessing the state of the stock. Too much attention should not be given to the details of the curves, but it should be stressed that even for the upper (most favourable) curve the marginal efficiency falls significantly below 100% when the stock is still relatively lightly exploited. For example it falls to 90% when the catch is between 10% and 30% of the maximum, i.e., at these low exploitation rates the reduction in catches by existing fleets is 10% of the catch taken by additional vessels.

In practice foreign vessels will often not exploit the same segment of the resource as local vessels. Typically they can be expected to work further offshore and in deeper water. This is likely to involve somewhat different species, and usually larger and older individuals when the same species are concerned. An obvious, but perhaps not entirely typical example is that of most penaeid shrimps. Juvenile shrimp occur in lagoons and other inshore waters, and are taken there mostly by small-scale fishermen using traditional gears, while the adults occur offshore and are harvested by commercial trawlers (locally based or from foreign countries). In such cases, if only the events during a single brood of fish or shrimp is considered, there will be no direct effect of the offshore fishery on the inshore catches. However, if heavy fishing affects recruitment of young fish, then the offshore fishery can affect the fishery on juveniles. To the extent that the most serious impacts of too heavy fishing come as a result of recruitment failure, and the fishery on the adults can have the final determination of the size of the spawning stock, this effect can be large. However, it is difficult to determine and conclusive evidence of so-called "recruitment over-fishing" usually comes only after the stock concerned has collapsed.

To the extent that a new fishery exploits total different species to any existing fishery there will be no immediate impact. However, it is unusual for there to be no overlap at all. Trawl fisheries in particular tend to take a large number of species incidentally (the so-called by-catch) even when they are targetting principally on one or two major species. These can cause losses when there is a local fishery specializing on one of the by-catch species. For example in the Northeast Pacific one of the most valuable demersal species in the North American fisheries is the halibut. Considerable problems were raised (particularly before the introduction of 200 mile limits) through the incidental catches of small halibut by the trawl fleets from Asia, which were targetting on the more abundant but lower priced demersal fish (flatfish, rock fish and Alaska pollock).

Even when there is no overlap, it cannot be assumed that there will be no interaction. Experience in areas as diverse as the North Sea, the Gulf of Thailand, and the upwelling areas off California and Chile/Peru, have shown that the relative abundance of different species can change dramatically, and that the rise or fall of one species can be influenced by the degree of exploitation of other species. The interactions can be in different directions. The abundance (and hence the catches) of a predator will tend to be reduced by heavy fishing on its prey. However, catches of the prey species will tend to benefit from heavy fishing on its predators, or on other competing species.

Precise assessment of the reduction in catches by the existing fishery as a result of allowing access by foreign vessels will probably be difficult. Nevertheless some rough calculations can always be done, which will at least show the likely order of magnitude of any potential loss to existing fisheries, which can then be set against the potential benefits. At a minimum yield curves (or at least yield-per-recruit curves) of the type shown in Figure 1 can be determined. These will tend to provide an upper limit to the losses, on the assumption of complete mixing.

The assessments of the likely impact of foreign fishing should in most cases not be limited to a single 'best', or 'conservative', estimate, but should consider how the effects might be modified by the nature of the foreign access, and the degree to which this can be controlled. For example, a foreign fishery might be considered that could operate a long way offshore partly on species not caught by the local, inshore fleet, and partly on the older individuals of the species caught by the local fleet. In either case the direct impact of an offshore fishery would be expected to be small. However, the best catch rates for the foreign vessels might occur closer inshore, so that there would be greater overlap in species and sizes of fish caught with local fisheries, with correspondingly greater impact. The assessment of potential losses should therefore take account not only of the gross magnitude of any foreign catch, but also the sizes and species of fish caught. The degree to which these characteristics of the foreign fishery can be specified in advance, and made part of an access agreement - and enforced - is obviously also an important part of any assessment.

3.2 Costs of monitoring and control

The responsibility placed by the new Law of the Sea on the coastal state for the conservation and rational utilization of the resources of the EEZ, e.g., in determining the allowable catch, etc., implies costs to the coastal state. A full implementation of this responsibility might seem to imply that all relevant data (including statistical information from the fishing fleets) are collected and compiled; that these data are analysed to determine the status of the stocks; that appropriate management measures are determined and implemented, and that action is taken to ensure compliance with the regulations. All these costs tend to increase when foreign vessels participate in the fishery.

The most obvious of these costs is perhaps those involved in the last stage - control and enforcement. This aspects has been considered at a number of FAO consultations, and will not be considered further here, in a note concentrating on resource aspects.

The other costs, particularly the costs of data collection and research, are not negligible, and tend to be increased by the presence of foreign fishing, and the changes in the Law of the Sea. The first point is obvious - if fishing is restricted to local fleets, and perhaps only to the near-shore stocks, the amount and costs of research needed to monitor the stocks is clearly less than when large fleets are involved, and monitoring of the resources will have to cover their activities, and the offshore areas they exploit. The second needs some explanation. In the days of a 3 or 12-mile limit, when all nations had at least a theoretically equal access to high-seas stocks, there was a tradition - best developed in the discussions in ICES and ICNAF - for complete pooling of basic data (e.g., catch statistics) and free exchange between all scientists. Any country could have access to fairly comprehensive and unbiassed information about any stock by doing little more than participate in the discussions of these bodies, or their appropriate working group. While the situation has not changed completely, scientific discussions are now much more influenced by the conflicts of interest between the different countries. These, as a result of the changes in jurisdiction, have become increasingly polarized between coastal states and distant water fishing countries. In particular, in the context of granting access to a possible "surplus" it is clearly in the interests of the latter to show that stocks are large, and under-exploited. The coastal state would prefer a more conservative interpretation.

In these circumstances a coastal state would be foolhardy to rely entirely on research and interpretation provided by the distant water countries. It will require sufficient research effort and scientific expertise of its own to at least check the systems of data collection, and the methods of analysis used. This raises questions of more than cost; many of the coastal states have only limited scientific expertise, and what they have is in strong demand for other urgent tasks. Here there is a clear opportunity for independent input, as exemplified by FAO's regional fishery bodies, and particularly the role played by FAO or other experts independent of any of the countries involved, in the technical activities (assessment working parties, etc.) of these bodies.

Note:
I am grateful to Prof. Burke for drawing my attention to the question of what data the coastal state is required to take account under the terms of the Convention. This is a legal question which I am not competent to answer. The point here is what data a coastal state would need, in own interests, in order to set appropriate controls. It will need more data, and the data will cost more to collect and analyse and there are foreign fleets fishing.

3.3 Indirect effects

In addition to the above direct effects, allowing access to foreign vessels will often indirectly affect in a number of ways the patterns of national fisheries development in the coastal state. The effects can be beneficial - the foreign fishing can demonstrate where fish are, and how they can be caught, and develop a market (in the foreign country, the coastal state or in a third country). All of these can help the coastal state in building up its own fishery, and in many cases, ultimately replacing the foreign fishery. However, this effect may not be quite as beneficial as it might seem. The obvious tendency is then for the local fishery to develop along similar lines to the distant-water fishery. That usually involves large sophisticated vessels, with high capital and running costs, but relatively low labour costs. This may well not be the most appropriate form of development for the coastal state. As has been emphasized elsewhere (including in documents for other preparatory meetings for the FAO World Conference, e.g., on Control of Effort, and Development Strategies), there are a great variety of objectives (food, employment, economic profit, etc.) which a country can pursue, and the choice and balance between these objectives will greatly influence a country's policies. In particular it is likely that national objectives, and other non-fishery factors (availability of capital, or of skilled or unskilled labour) in the coastal state will differ from those in the distant-water fishing country. The former may therefore find that it would be quite inappropriate to use the latter as a model or guide for developing its own fishery.

In passing it may be noted that even in developed countries the large distant-water trawler is seldom the most economically efficient unit. Developing countries can be misled into thinking that very large sophisticated trawlers represent modern fishing (and therefore the type of fishing they should aim at), whereas the most successful fisheries in developed countries are often the small, family-owned, vessel of a type not so very different to vessels appropriate to developing countries.

Somewhat similar remarks can apply to some of the "benefits" - training, research, technical assistance, etc. - that can be offered by distant-water countries in return for access. These undoubtedly can be extremely useful to the coastal state if appropriate to its conditions. Too often, though, the nature of the training, etc., is appropriate to the conditions of a distant-water fishery (e.g., training in the operation of large factory trawlers) and at best may be useless, and to the extent that it encourages the wrong type of local development, may be positively harmful. As another example the construction (even at no cost to the coastal state) of a large well-equipped scientific laboratory or research vessel can be of little value if the coastal state has not the staff and resources to run the institution or vessel properly, and would be harmful if it distracts scientific resources from other work.

4. DISCUSSION

The earlier sections of this paper have reviewed briefly the concept of a 'surplus' existing within a country's EEZ to which foreign fleets might be given access, and the costs, direct and indirect, which might be experienced by the coastal state as a result of granting such access. It is clear that a "surplus" is a slippery concept, subject to various interpretations. Under plausible interpretations a "surplus" exists, and access should be granted, only if the benefits that could occur would exceed the possible costs, direct and indirect, to the coastal state. These costs include reduction of catches by existing local fisheries, costs of research, monitoring and enforcement, and the possible undesirable distortion of future developments in the coastal fisheries.

These may not be easy to evaluate precisely, but rough estimates are possible, and should always be made. These evaluations should also consider how different conditions of access to a given 'surplus' (e.g., in terms of the season or location of fishing, or the sizes or species caught) can affect the losses. In many cases, especially when the seame stock would be exploited by the local and foreign fleets, the losses could be considerable. Then a 'surplus', under the interpretation used here, would not exist, even though the current catches might be well below some theoretical MSY. Coastal states may therefore wish to adopt a cautious attitude to granting access, though it should also be stressed that the potential benefits can, in some circumstances, be large (though the true worth of some of the 'benefits' should be evaluated carefully), and, subject to the assessment of the possible costs, access by foreign fleets in those cases should be welcomed.

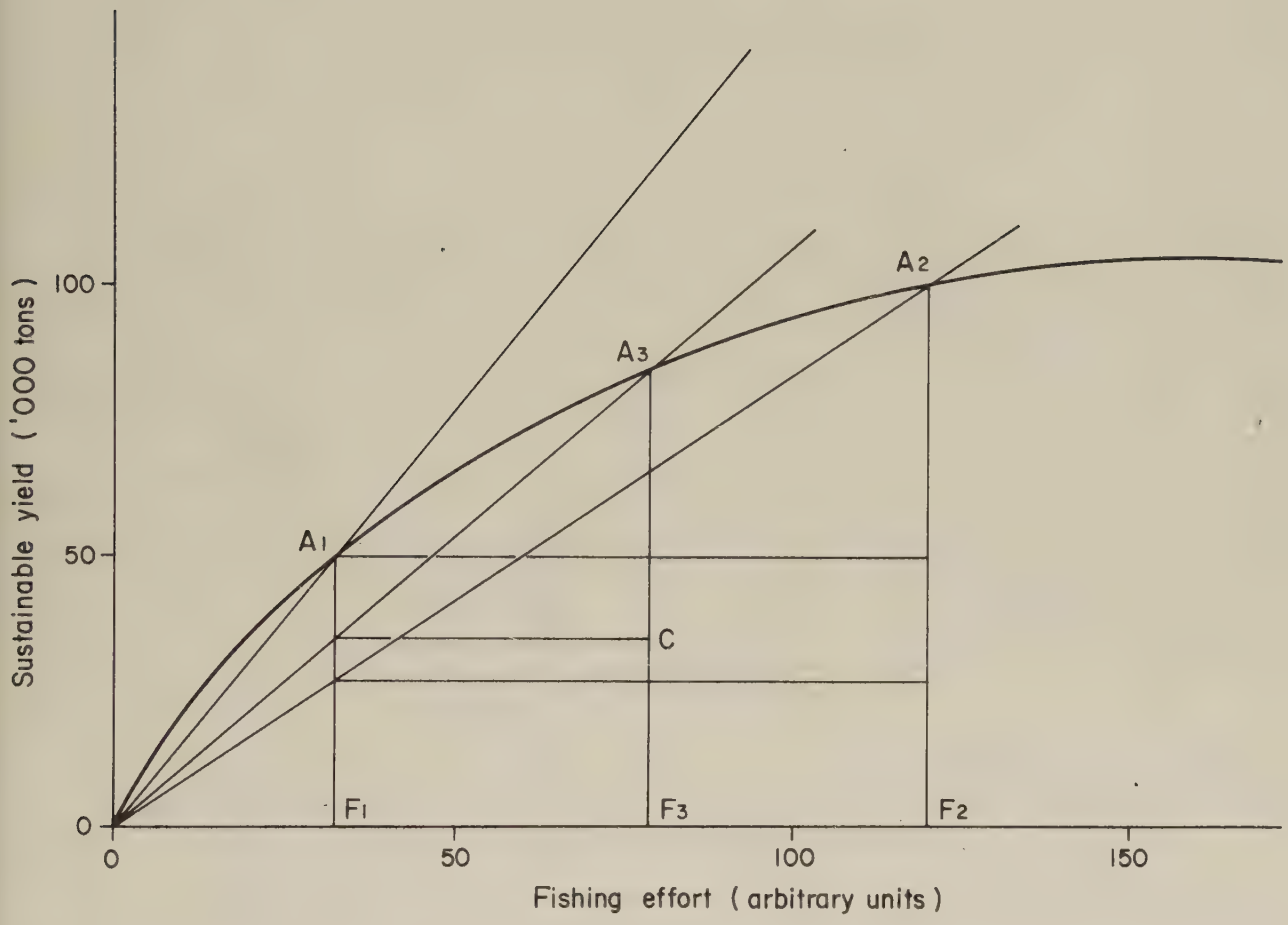
Sustainable yield ('000 tons)
100
50
0
A1
A2
A3
C
F1
F3
F2
0
50
100
150
Fishing effort (arbitrary units)

Figure 1

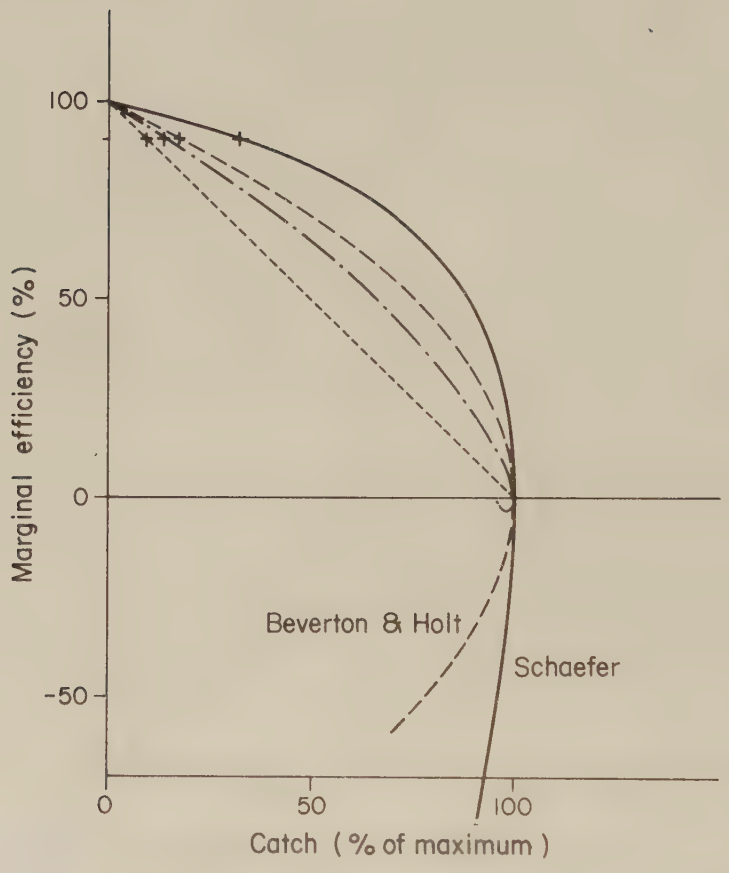
100
50
0
-50
Marginal efficiency (%)
Beverton & Holt
Schaefer
0
50
100
Catch (% of maximum)

Figure 2

ANNEX 5

SOME CONSIDERATIONS ON THE ADAPTATION OF NATIONAL POLICY IN A DISTANT WATER FISHING NATION TO THE RECENT EVOLUTION OF THE LAW OF THE SEA

by

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The development of Spain's.Fishing Industry can be traced back to a specific date, more than twenty years ago. On 8 September 1961, the freezer trawler LEMOS set sail from Vigo to fish off the coast of Argentina. A pioneer of Europe in waters of the southern hemisphere, it was followed a month later by the ANDRADE, this time headed for the coast of southern Africa. These were the fleet's first two long-range motor trawlers, which, equipped with fast tunnel freezers capable of preserving the entire catch, enabled the Spanish consumer to gain access to fish from those waters, delivered with all of its nourishment and flavour intact.

The leap forward represented by this event in the annals of the expansion of the Spanish fishing fleet was all the more noteworthy considering that up until then, except for whaling activity, fishing operations carried out by western Europe had centred on the North Atlantic, from the Barents Sea to Senegal. It seemed at the time that not even the low yield obtained using bottom trawls on the traditional fishing grounds, some already afflicted with overfishing, would prompt a change in attitude on the part of the shipowners concerned or bring about a change in perspective in their plans of action. As a result, the fishing areas in the southern hemisphere, both those fed by the Malvinas Current and those fed by the Benguela Current, were in practice closed to the fleets based from Spitzberg to Las Palmas, which did not venture to try their luck below the Equator.

Of course, this event was important not only because it meant the opening up of a completely new fishery as far as the geographical location of the fishing banks was concerned, but also because it ushered in the implementation of a new industrial process that ensured the effectiveness and success of this expansion and marked the way for others to continue development over the years.

At the beginning of the 1960's Spain was not yet an industrially developed country, but it did possess a deep-rooted tradition of long-distance fisheries. In the second half of the 1920's the cod fishery underwent a revival, though our fishermen had, as early as the sixteenth century, worked the waters of Newfoundland as a matter of course. This fishery was consolidated after the end of the Second World War, and in 1951 the Spanish fleet operating on the banks off Newfoundland, Nova Scotia, Labrador, and Greenland was composed of 21 otter-trawlers and 57 pair trawl units, 135 ships in all, displacing a total gross weight of nearly 47 000 tonnes.

As was already mentioned, this salt cod era was followed by the era of industrial refrigeration, first in the form of crushed ice, then using slow freezing techniques, and most recently using fast and flash freezing methods, which has had a clear and direct impact on the geographical expansion of fisheries throughout the world. Thus, it can be stated unequivocally that the introduction of industrial freezing technology in vessel economy to preserve the catch in perfect condition for more than enough time to permit consumption at a later date has been the key to the most spectacular growth story ever recorded in the history of fishing.

Private initiative has undoubtedly been in the forefront of this process.

However, not even the panorama just outlined fully explains the vigorous thrust of technical progress and specialization undergone by the Spanish fishing fleet since the early 1960's. This was basically the result of two structural defects: the reduced extent of the private sector and private financial circles which were unable to discern, among the many options available to them, the fishing sector's true potential for development, together with the fact that the special characteristics intrinsic to this sector were ill adjusted to the existing system of credit.

In this situation, government assistance was decisive. It was embodied in a piece of legislation of enormous significance to the subsequent development of the fishing sector, which to a great extent owes its present structure to the Modernization and Protection of the Fishing Fleet Act (Ley sobre Renovacion y Proteccion de la Flota Pesquera), promulgated on 23 December 1961, barely two weeks after the return to Vigo of the freezer trawler "LEMOS" previously referred to, following its first expedition to the fishing grounds in the South Atlantic.

It was effectively through this law that the Fisheries Administration set forth resolutely on the path of direct assistance to the private sector, with the clear goal of comprehensive development in mind. For this purpose it set out to provide, on extremely favourable financial and economic terms, the resources needed to expand the fishing fleet directly to the beneficiaries: actual or prospective shipowners, in such a way that the effect of such a policy would make themselves felt beyond the limited scope of the fishing sector itself. In this fashion, at a time when the Spanish economy was going through a clear-cut phase of reactivation, fishing would also contribute to the development of certain other economic sectors.

Ten years after the inception of the financing policy whose main characteristics have just been outlined, the most direct and obvious consequence was undoubtedly the creation of a well-equipped and outfitted long-range freezer fleet capable of attaining high levels of productivity. At the end of 1971, the fleet was composed of 261 fishing units: 236 trawlers directed preferentially at white fish, cephalopods, and shell-fish, and 25 purse seiners fishing for tuna and tunalike species, in all 141 000 GRT; plus 40 fish factory ships or refrigerator transports capable of handling frozen fish, for an additional 72,000 GRT.

However, this new component of Spanish fish production is not the only reflection of the fisheries policy undertaken in 1961, when for the first time in its history Spanish catches reach the million-tonne mark (more exactly: 1 058 794 tons). From that point on, itw growth rate surged. Thus, barely ten years later the total volume of catches had risen by more than half a million tons, making Spain the seventh-ranking fishing country in the world (inland fisheries excluded), the sixth in terms of primary earnings from fish products, and the fifth in relation to per capita fish consumption.

The regulations traceable to Law No. 147/1961 of 23 December, the Modernization and Protection of the Fishing Fleet Act, exerted a continuous effect on other economic sectors in addition to the fishing sector, even going as far as to take specific measures directly affecting these other sectors. This was the case, for example, of shipbuilding, as had already been considered, when in 1966 a new approach to financing the fishing fleet was adopted. After that year, in accordance with the regulations discussed previously, loans could be granted as described by both: private banks and the "Banco de Credito a la Construccion" not just to shipowners, but to shipyards as well, thus enabling them to finance long-term ship sales. It should be noted that this, in turn, gave rise to considerable control problems for the Fisheries Administration, making it difficult to obtain an overview of development within the sector and the actual situation at any given time.

Other economic sectors directly involved in this processus included the refrigeration and freezing industry and certain other branches of activity that may be classed together under the category of subsidiary industries. Not forgetting, of course, what are termed "related industries", the wide variety of which attests to the many different ways of processing fish products: the whaling industry, the canning industry (the most important branch, with a number of different production lines), fish curing, land-based fish freezing, and the fishmeal industry.

In any case, the development of the fishing industry did not merely exert an effect on related sectors; rather, beyond the limited confines of the system of production, it has had, over the years, a significant impact on two macro-economic variables: domestic consumption and foreign trade.

Attention is called to a phenomenon which is not new but which, it is also true, has, in the course of the years, attained a new dimension, both quantitatively and qualitatively speaking. We are referring to the growing presence of Spanish vessels on international fishing grounds or in the waters of other countries. Clearly, this has been the result of the policy initiated in the 1960's, which has thus accomplished one of its major objectives: gaining access to fisheries located further and further away, in order to thereby reduce the dependence of domestic fish consumption on the resources of a narrow continental shelf already subjected to intensive exploitation. But two events were beyond the Spanish Administration's control and outside its influence and have brought about a dramatic shift in the status of the world's fisheries. The events were particularly telling for Spain, as they radically altered the context in which its fishing activity was being carried out. We are referring, naturally, to the oil crises and the widespread extension of the exclusive economic zones to 200 nautical miles by coastal countries.

To put this problem in its proper perspective, its dual scope must be recognized. On the one hand, these events directly affected the existing situation, which basically conflicted with the new set of circumstances; and, on the other hand, they called into question the goals and guidelines that had until then shaped the development of the Spanish fishing fleet, at a time when it had entered a second stage of re-organization aimed chiefly at modernization and technological improvement in function of the different types of fisheries and the varying states of the resources on the different grounds.

Thus, as a consequence of the oil crisis, it has become potently clear that the model described for the reorganization of the fleet is no longer appropriate today, simply because the cost of fuel is a factor that cannot be ignored by ship-owners when deciding on the type of investment to make, primarily with regard to relationshp between vessel power and the level of productivity projected. This is also true for the Administration when issuing fishing policy guidelines.

With regard to the second event, widespread extension of the EEZ to 200 miles, three points should be noted by way of introduction:

(a) This came about in open opposition to the historical view of the freedom of the seas sustained by traditional sea powers as a common inheritance, a concept which went hand in hand with the view of an inviolable ocean which, in the words of Hugo Grotius, a seventeenth-century jurist, theologist, and historian and staunch defender of the principle of freedom of the seas, "may neither be owned nor enclosed", as it is "the seas that possess the land" rather than the other way around.

(b) The controversy sparked following the Santiago de Chile Declaration in 1952 and encompassed later on a number of interlocking issues: navigation in territorial waters and strategic straits, sea fisheries, oil and mineral resources under and on the sea bed, exploitation of the continental shelf, the establishment itself of exclusive economc zones, and problems involving the defense against pollution of the sea.

(c) The disparity of interests existing between States, is enormous, but this is also an internal problem, giving rise to extreme tension even within individual delegations at the III Law of the Sea Conference, where military interests clashed with economic interests, mining interests conflicted with fishing interets, strategic interests ran counter to scientific interests, and so on.

The fact is that, from a fisheries standpoint, the situation ensuing from the revolution in the Law of the Sea has less straightforward repercussions than the oil crisis, yet it undoubtedly looms much larger. The direct effect of limited access to traditional fishing grounds has forced a process of selection to determine which vessels will be granted the right to operate. And this process extends not only to the vessels themselves, but also to the grounds and even to different types of fisheries.

Thus, the matter is extremely complex, and even more so bearing in mind that the objectives to be accomplished through the selection process are not always compatible. For example, what should have priority? Streamlining the fleet so as to obtain maximum economic yield per unit, or maintaining the highest level of employment? In other words, the best possible fleet or the largest?

The situation is even more pressing in view of the fact that the answer to these questions will affect a large number of coastal regions whose economic and social existence depends heavily on fishing. This obviously introduces a new factor which forces a reconsideration of the whole problem.

It is clear that these circumstances are quite distinct from the situation considered at the outset, when restructuring the fleet basically meant improving its level of technology, achieving higher yields and raising fishermen's living standards.

In other words, it is not enough today simply to acknowledge the fact that the generalized declaration of exclusive economic zones has thrust into a full-fledge crisis the traditional right to fish in what were until then international waters, nor that this immediately triggered a wave of negotiations between countries in an attempt to lay as quicly as possible the foundations for bilateral fishing relations, especially with regard to quotas, licences, joint exploitation of grounds, foreign trade, and so on.

Instead, this new problem, superposed on already existing ones, contains not only circumstancial elements but also a deeper, structural aspect. The former elements will be countered with greater or lesser success by emergency measures. It is the structural aspect of the problem which is by far the more serious, in that it demands a profound transformation of the fishing sector in order to adapt it to the new conditions.

In the case of Spain, these transformations have even penetrated into the organizational and operative structure of the Fisheries Administration itself in an attempt to adjust it to the complexity of the problems confronting the sector. And we stress the term complexity, because we are not faced with separate, unconnected problems that can, once they have been arranged in order of priority, be taken on one by one. Quite the contrary, we are dealing with interdependent issues which if viewed out of the context in which they have developed, will undoubtedly lead to erroneous conclusions and incorrect solutions.

For instance, it is evident that a large part of the problems encountered at the production level as well as at the marketing level are a projection of defects in the structure of the fishing companies, above all, those engaged in certain types of fisheries. Today, it must also be added that, confronted with the challenge of the 200 mile zone, this issue constitutes in many countries a further and particularly significant obstable in the path of an effective foreign fisheries policy.

Looked upon from this perspective, present fisheries policies are an attempt to contend with the grave difficulties facing the sector, not merely on a temporary or conjunctural basis, but also to seek coherent long-term solutions so that they might serve as a basis for future development along qualitative rather than quantitative lines.

The scope of this policy in Spain can be summarized by the following six points:

- management of fisheries in our own fishing grounds;
- reorganization of the fleet according to different types of fisheries in foreign and international waters;
- improvement of the internal fish marketing system;
- foreign trade policy for fish products;
- foreign fisheries policy, both multilateral and bilateral;
- expansion of the Fisheries Administration in order to adapt it to the needs of the new circumstances.

Worthy of note within this framework is Royal Decree No. 681/1980, of 28 March, concerning national fisheries management, the starting point for gradually establishing the corresponding management programmes which will ultimately make possible a restructuring of our fleets by fusing together two basic goals: regulation of fishing capacity and adaptation of vessels to the grounds.

To achieve these goals the fundamental and clearly defined principle of prohibiting any increase in fishing pressure on fish resources has been adopted. The prime objective will be to optimize the technical level of the fleets directed at each fishery in order to enhance the economic results obtained. This means that technological improvements will have to be compensated for by the reduction of at least an equivalent amount of fishing capacity. At the same time, the interaction of different kinds of fishing activity carried out simultaneously on the grounds will also be given due consideration, in order to achieve the optimum estimated equilibrium state.

To sum up, recognizing that fish resources are not unlimited and that rigorous conservation measures are needed, the logical consequence is that strict management and control of our fisheries is a prerequisite for restructuring the fleet, which will be possible only after the limits to our fish resources both national and international have been established.

As far as the Spanish fleet in other countries' waters is concerned, the private fishing sector has been compelled to acknowledge in some instances the existence of excess capacity - though this of course varies according to the fishery. This means that, on the basis of totally new and different conditioning factors, and as a direct consequence of the 200 mile limit, fisheries policy has had to conceive a programme for restructuring the fleets that goes beyond the normal modernization process. Such a programme is not easy to devise, because, due to the broad geographical extension of the fisheries and the different operational and technical levels of the corresponding fleets, it must contemplate the possibility of alternate access to different fishing grounds. That is, it has to analyze the degree of "mobility" of vessels and consider fishing gears that could be used on an alternating basis.

Nevertheless, the most original and effective Spanish response, swiftly implemented following the establishment of 200 mile zones, has been the creation of joint fishing ventures, authorized by the Royal Decree of 8 October 1976, which provided for the maintenance of fishing vessels in operation in the EEZs of those countries which would no longer allow vessels under foreign flags to operate and which were not yet ready to replace them with vessels and crews of their own.

Article 1 of this decree defines joint fishing venturs as companies formed in a foreign country and subject to the laws of that country by Spanish fishing companies qualifying as such under the definition contained in Law No. 147/1961 (the Modernization and Protection of the Fishing Fleet Act) in association with citizens or juristic persons of the said country, or, where appropriate, of other countries, for the purpose of jointly exploiting marine fish resources.

In order to achieve this end, combined with the need to ensure an adequate supply of fish for the domestic market, which was threatened by the new international situation, the above mentioned Royal Decree established norms for:

(a) regulating the effects of Spanish capital investment in fishing countries through joint ventures;

(b) regulating the transfer and sale of Spanish vessels tc joint venture companies;

(c) regulating the importation into Spain of fish caught by such companies.

Spanish companies participating in joint ventures were granted the usual incentives provided in the case of exports: tax, credits, special credits to purchasers, underwriting of non-business risks, and the like.

In view of the special nature of this type of activity and the particular circumstances involved, other incentives granted included the possibility of importing, free of taxes, countervailing duties, or other charges, part of the catch made by Spanish vessels transferred or sold by Spanish fishing companies to joint ventures companies.

Therefore, after estimating the expected production of each joint venture, the Fisheries Administration establishes for every six-month period a total global quota of authorized duty free imports in function of domestic demand and estimated catches by the Spanish fleet.

The private fishing sector responded very favourably to this initiative. We have previously referred to the Spanish fleet's high degree of dependence on a number of fishing grounds suddenly placed under the jurisdiction of other countris. Just two years after the issuance of the decree, 80 fishing units from this fleet were already operating in waters of Morocco, South Africa, Chile, Argentina, Uruguay, Haiti and Mexico, under the respective flags of these countries. It should also be noted that the vessels involved were generally large, on average some 900 GRT, 1 700 BHT, with a crew of 30. Today there are in all 182 vessels involved in joint ventures in 14 countries totalling a GRT of 95 748 tons.

An additional benefit of these joint ventures has been the removal of a growing number of large-capacity vessels from traditional fishing grounds presently subject to severe restrictions, thus helping the fleet to adjust to the new situation.

Subsequently, Royal Decree No. 2.209/1981, of 20 August, issued complementary regulations eliminating construction date restrictions on vessel that could be transferred, which, in conjunction with a scrapping requirement, further facilitated the removal of obsolete units while at the same time promoting shipbuilding.

In the final analysis, joint ventures represent a special modality of overseas investment which brings immediate results by ensuring a substitute supply of fish previously filled by "domestic" sources which are not longer available to the same extent.

In the short and medium term, Spanish legislation dealing with joint ventures actually translates out into indirect assistance for exports of fishing technology. This contributes to the fisheries development of countries lacking in experience, technical infrastructure, and distribution systems and thus forms an important part of Spain's policy of cooperation with those countries.

Lastly, the economic effects of Spanish legal regulations concerning joint ventures have also been important with respect to employment policy, by preserving crew member's jobs.

In accordance with the world economic and political situation of the sixties, Spanish legislation was expansionist, whereas, that on the second half of the seventies has become more cautious, leading up to the last few years, during which, following a general trend, Spain has started a policy of structural adaptation to the new circumstances.

This adapation is focussed on a reduction of the medium range fresh fish trawler fleet in benefit of the remolding of the long distance freezer trawler and purse seiner fleets that still have a future for a certain limited expansion and that will need some transformation in order to adapt themselves to the higher cost involved in their exploitation.

ANNEX 6

FORMS OF FOREIGN PARTICIPATION IN FISHERIES: COASTAL STATE PRACTICE

by

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Although some countries have claimed extended fisheries jurisdiction for over a generation, most claims are more recent, and most countries are still in the process of formulating their policies toward fisheries in their extended zones. One of the basic elements of such policies is the attitude toward foreign participation in the fisheries of the zone. There are three broad choices open to the coastal State: to prohibit or discourage any foreign participation, to grant access to wholly-foreign operations (licensing), to permit foreign access only in associations with national partners (joint ventures) or national operations (over-the-side sales).

These most be seen as broad categories, not as uniquely defined choices. None of them is truly exclusive; even a policy to exclude foreign participation will have exceptions dictated by the need for foreign inputs and markets, the presence of immigrant foreigners, the difficulty of defining and controlling the activities prohibited to foreigners. Nonetheless, each of the three might properly be described as the dominant policy of a coastal State toward foreign participation in fisheries.

1. LIMITING FOREIGN PARTICIPATION

Several countries have, officially at least, no foreign participation in fisheries under their jurisdiction and others seem bent on eliminating foreign participation to the extent possible. The ostensible reason for such a policy is to improve catches and opportunities for national fishermen.

Reducing foreign fishing can have a beneficial effect in several ways, but whether the benefits will be realized and whether they will exceed the costs are complex questions which will have very different answers in different fisheries. In a crowded, homogenous fishery, the exclusion of some (foreign) fishermen is likely to improve catches for those (local) fishermen that remain. The effect may be nullified if new fishermen then enter the fishery, but even so there may be benefits through increased employment, local procurement and marketing. Where there are fisheries on related stocks, reduction of effort on one stock may have unpredictable effects, even reducing availability of the other stock. Where the fishery is lightly exploited, reducing foreign fishing may have no discernible effect on local catches, although it would normally increase opportunities to expand local effort.

Whether or not reduced foreign fishing improves national fisheries, it may be very useful in avoiding conflict between different gear and different groups of fishermen. In the typical gear conflict, it is the local fishermen who are most likely to suffer losses, so the government's interest in reducing conflicts is quite clear. Even where there are no competitive or conflicting effects of foreign fishing, it may be strongly disliked by national fishermen. A government may thus have good political reasons for reducing foreign fishing or at least making it less vivable.

Foreign fishing is normally seen as a source of revenue and other benefits, against which any adverse effects on local fishing must be weighed. In some cases, however, the costs of administering and policing foreign fishing may make it unattractive regardless of effects on local fishing. Vigorous exclusion would itself impose costs of policing; a state might well decide to pursue no active policy, neither allowing foreigners to fish nor expending any effort to prevent them. This is not a rare law enforcement policy.

As there may be benefits in excluding foreign fishing, there are also dangers. The most serious one is where a country does not have the capacity to meet its fishing targets (whether in terms of yield, profit or other factors). Excluding foreigners would then imply expanding national effort, frequently into new fisheries and unfamiliar techniques.

Many countries find they possess few of the elements for such a development, beyond the resource itself. They thus confront the need to create economic organizations, import equipment, learn techniques, train personnel and find markets. Any one of these is a heavy burden, and attempting them all at one can easily lead to commercial disaster. Thus the advantage of a gradual phasing out of foreign fishing to make way for a gradual development of local fishing.

Even where a country is not lured into unprofitable ventures, total exclusion of foreigners may restrict opportunities to utilize unconventional resources, take advantage of fluctuations in abundance, complement local skills. Flexible arrangements with foreigners can be a buffer that allows fisheries management to respond relatively quickly to changing circumstances. Since it cannot always be predicted when and how foreigners might be used in a fishery, it is wise to avoid rigid prohibitions in fishing legislation, even where there is a general policy of exclusion.

2. ACCESS ARRANGEMENTS

Access arrangements for foreign fishing may be governed by bilateral agreements, licences, contracts or some combination of the three. They may provide for foreign fishing as such or for some form of association. (Considerations peculiar to joint ventures and other associated arrangements are discussed below; in this section it is assumed that the fishing operation is entirely foreign).

(a) Bilateral agreements

Bilateral agreements have been categorized according to purposes as: phase-out agreements; reciprocal fishing agreements; commercial licensing agreements; and framework agreements for joint ventures. Phase-out agreement are by definition transitional and need not detain us. Reciprocal fishing agreements have greater long-term importance. Many fisheries are effectively internationalized by the coastwise movements of fishermen, who sometimes acquire a semi-local status. In other cases, seasonal or other factors make it economic to use the same fleet in the waters of two countries. Where such conditions pertain and political factors are favourable, the utility of reciprocal fishing agreements is clear. Actually reaching and implementing an agreement is not so easy, however. The two sides may not gain equally in the exchange; there may be difficulty defining the vessels eligible to benefit from the agreement; there may simply be too much friction and too little trust to allow the agreement to work.

Commercial licensing may or may not be based on a bilateral agreement, and in fact it may or may not even involve an actual licence, but we shall retain the term "licensing" for non-reciprocal access by wholly foreign fishing operations. An agreement governing such access has the potential advantages of gaining flag state co-operation in compliance control, which may be enhanced by a regional network of harmonized agreements, and of providing for transfer of non-cash benefits (such as training) from the flag state. Agreements also facilitate the allocation of surplus under the Convention on the Law of the Sea, which is essentially conceived in terms of inter-state obligations. It should be noted that agreements between coastal States and non-governmental fishing associations are also commonly used, both instead of and in addition to state-to-state agreements. The licence itself is normally issued by the coastal State under its national legislation, but this is not always the case. Some are issued by flag-state associations under an agreement, others are more in the form of contracts between the coastal State and the licensee, based on no specific legislation.

(b) Commercial licensing

The main issue of commercial licensing is not the form, but whether to have it or not. The great advantage of commercial licensing arrangements is that they can be set up quickly, the terms can be renegotiated relatively easily and frequently, and they can be discontinued when necessary. This provides an opportunity to adjust the amount and nature of fishing effort without social and economic dislocations in the local fishing community.

Financially, commercial licensing represents the least risk. It provides a known and steady income which comes off the top of the operation (i.e., is not susceptible to financial manipulation through hidden profit taking) and is not subject to commercial risks. It is a rent paid directly to the coastal State government and can be used for development or other purposes at that government's discretion. Where foreign fishermen have a comparative advantage, this could be determinative. A related advantage is that the coastal State's financial commitment is minimal whereas development of national capacity normally requires capital.

Commercial licensing has some, though fewer, long-term or developmental uses. If proper catch reporting systems are in force, it can provide essential information on the resources available for fisheries development, through the only real trial - commercial fishing. Local development provisions can also be built into commercial licensing arrangements, through training and technology transfer requirements, the employment of local crew members on licensed vessels and requirements, such as local landing and processing of catch, designed to spur the development of local processing industries or the supply of protein to local markets.

The main disadvantages of commercial licensing are a corollary of its low-risk, low-cost, high-flexibility advantages. Even where development provisions are a condition of licensing, the unsubstantiality of the arrangement counsels against great expectations. A longer-term licence could be the basis for greater stability and commitment, but in that case a coastal State would probably expect more participation by locals - one of the kinds of association described below.

Another disadvantage of commercial licensing is the possible failure to receive the advantages: the fishermen may cheat, may not pay, may not report their catches accurately. The costs of controlling this tendency may significantly reduce the net benefits to the coastal State. Of course against this consideration must be balanced the cost of enforcing a ban on foreign fishing. For many countries, accepting reduced benefits and incurring less enforcement costs represents a net advantage.

3. ASSOCIATION WITH NATIONALS

There are a variety of arrangements under several legal forms that associate foreign fishing interests with coastal State citizens and entities. These include equity joint ventures, joint operations with or without profit-sharing, charters, over-the-side sales and others yet to be identified. All of these can be used in combination with each other and disguised as each other. National policies, however, frequently distinguish between joint ventures - which may qualify as local - and other arrangements which may or may not have any special status.

(a) Joint ventures

For a long time joint ventures have been favoured by developing countries as a means of developing their own fishing industries. They have also, perhaps more commonly, resulted from foreign fishermen's seeking access in the face of measures to limit foreign fishing. If a local company or a certain percentage of local ownership is required, a company can be established or a partner found. Other joint ventures have been formed in fisheries - as in other sectors - for financial, commercial or technical reasons that had little to do with government policy.

The attractions of joint ventures to coastal countries are inherent in the motivations for their formation (as in the drawback of their use to evade restrictions on foreign fishing). As a means of development, the joint venture allows the coastal country to participate according to its capacities in an industrial enterprise without having first to master the technical and managerial skills needed to run it. The capacities of local managers and technicians may be increased as a result, allowing gradually greater participation. Industrialized countries stand to benefit in the same way, if to a lesser extent, since all of their fisheries are not equally advanced technically or commercially. This is especially so for resources with particular market requiremens.

The developmental objective is not inconsistent with another advantage of joint ventures - complementarity. The different skills, costs, markets of two countries or companies may be combined to maximum advantage. This is easily seen where a country can offer resources, shore facilities and low-cost labour, and a foreign company possesses capital, management and market access.

The drawbacks of joint ventures may be as great as the hopes placed in them. The greatest is risk, both commercial risk, which is generally high in fishing, and the risk of financial manipulation by the dominant partner. Both risks are especially significant to developing countries, which can least afford losses and have generally less sophistication in preventing them. Experience with industrial development assistance in the industrialized countries shows, however, that they too can be the victims of misplaced confidence.

(b) Other forms of association

This is an open category, covering at least three kinds of arrangement. One, typified by joint fisheries operations, involves foreign vessels fishing under foreign control. A middle category comprises foreign contractual services, including chartering of vessels, to a national company. Finally, there are arrangements typified by over-the-side sales whereby foreign interests conduct ancillary operations but do not participate in the actual catching of fish.

To the extent that these hybrid arrangements allow complementary skills and resoures to be combined to mutual advantage, they must be seen as beneficial to both the coastal State and foreigners. This is easily seen in - but not limited to - over-the-side sale of products without an attractive local market. These offer an especially interested possibility for development of artisanal fishermen in response to favourable world markets.

A reason for coastal State recognition of foreign association with nationals lies in its inevitability. It is very difficult in the modern world to exclude all foreign participation in fishing, and as soon as some foreign equipment, financing, technicians or markets become involved, it is very difficult to define "fishing" in such a way that foreigners cannot evade restrictions on their activities. They can buy company shares, enter long-term contracts, acquire processing plants, and do other perfectly legitimate things that have the effect of placing them in the fishery. There is an advantage, therefore, in a policy that recognized this and aims at setting the most beneficial conditions.

There are two principal disadvantages with these miscellaneous forms of association. One is that the foreigner will be attracted by the most profitable aspects of an operation, assuming the marketing role, for example, and leaving catching to the locals. Even where the balance between the parties is fair, the coastal State may suffer from the loss of national value added. For example, even if chartering foreign boats is cheaper for the fisherman, it reduces the sales of local shipyards.

The second disadvantage of these arrangements, in common with joint ventures, is their use to evade measures designed to limit foreign and favour local fishing. Local ownership requirements are easily evaded through the use of straw men and creative charter, sales and financing agreements. This in turn allows foreigners to benefit from favourable conditions that might be intended for nationals. With the difficulty of completely excluding foreigners, the only two responses are either to equalize conditions for everyone or to maintain a continual watch.

There are several different approaches a coastal State can take to regulating such a heterogeneous category. One is to deal with it as a whole by defining "fishing" or "foreign investment" very broadly and then regulating all of their manifestations. Within such an approach different positions can be taken toward different kinds of arrangements or individual judgements can be made in each case. The disadvantage of this approach is that it creates a considerable administrative burden. It may, however, be the most appropriate in a relatively small country where even modest investments would affect important national interests.

A more common method is to regulate not in terms of the category, but of particular elements of fishing. Typically these would be the definition of "fishing" or "fishing boat" and the definition of nationality. Thus if "fishing" only includes catching, foreign mother-ship operations would be possible, but not if fishing includes catching, transporting and processing. If the nationality of a fishing boat is defined by the nationality of its operator, it may be possible to charter a foreign-owned boat and fish on local terms. If nationality is defined in terms of the owner, skipper and place of construction, chartered and even purchased foreign vessels would fall under the category of foreign.

The disadvantage of depending on prior definitions is that they are too static. As soon as a regulated element is defined, arrangements are invented to circumvent it. And if the definition is tight enough it may then prevent arrangements that would be mutually beneficial. But this is probably unavoidable in regulating a major industry.

4. CHOOSING THE POLICY

It is evident from the foregoing discussion that any coastal State's policy toward foreign participation in its fisheries will depend on a combination of factors that is likely to be unique, both to the state and to the time. Each state therefore faces the necessity of developing its own policy and of constantly up-dating it. Nonetheless, there are some principles that seem to have more general application.

One is that the calculation of costs and benefits is complex. This is largely based on the proposition, examined at greater length in the paper by Gulland, that there is likely to be a significant interaction between foreign and local fisheries, even when they seem to be concentrated on different stocks. The problem is compounded by the fact that different fishermen and governments are all likely to have different combinations of fishery objectives, which are not easily weighed on the same scale.

Another general principle is the need for a flexible policy to meet changing circumstances. Resource situations may be poorly known or variable or both; the fishery will change in response to general economic developments as well as to the resource situation; both local and foreign fishermen will alter the situation further by reacting to the fishery policy itself. To the extent these factors dominate any fishery, policy would tend to favour those forms of foreign participation that are easiest to control and to eliminate where necessary. Where there is enough stability to favour long-term development, more stable forms of foreign participation might be enlisted in aid of it. The necessity of longer-term guarantees for longer-term investments does not, however, eliminate the need for continually up-dating the policy.

In all but very simple situation, coastal States will probably find that there is a use for all of the forms of foreign participation as well as for its exclusions from some fisheries. Where resources are unexplored or very lightly exploited, commercial licensing might be the best way to use them while learning about them. Where local fishermen are unable to dispose of catches for lack of processing or marketing facilities, arrangements with foreign companies for either shore- or ship-based processing may be the answer. Where a qualified local partner and other conditions exist for a major commitment to a particular venture with a suitable foreign partner, a joint venture can be the right form.

ANNEX 7

FOREIGN ACCESS BENEFITS IN FISHERIES

by

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INTRODUCTION

Proposals to levy fees in natural resource industries have a long and controversial history. Fishing industries are relative newcomers to the arena. Foreign access fees are even newer; it has been less than a decade since the concept became a plausible policy option. Despite three decades of well reasoned, and occasionally eloquent presentations, changes in fishing fees have varied from imperceptible to glacial. Despite this inertia, economists have cheerfully maintained an optimistic, although not unanimous stance; perhaps because Lord Darlington's criterion for cynicism is very nearly the inverse of what economics is about 1/. Economics is, in large part, the study of wealth or value creation and the general determinants of prices. Few economists are noted for their knowledge of the price of anything in particular. A policy toward foreign fees for fishing access poses interesting case issues for economic study in part because it requires that a price be imputed where none exists. Setting fees may also be regarded as an element in a "game". This game may be a zero sum game in which gains to winners equal losses of losers. It may also be a negative sum game in which players, figuratively speaking, cut off their noses to spite their faces. More productively, it may also be a positive sum game; one in which gains exceed losses resulting in a gain in real economic value or wealth. In the course of developing the topic, I propose to consider the following three facets of the valuation problem:

(1) Objectives of fees
(2) Producer Surplus and Potential Fees
(3) Measurement Methods and Problems

OBJECTIVES OF FEES

In setting fees, it is, in practice, not possible to separate objectives, or ends, from the means available to achieve them. However, a simultaneous discussion of objectives and means would be quite unreadable. Hence, if only for expository purposes, we will discuss objectives separately. A brief statement of each is useful to provide a terminology and framework for discussions. Among the objectives to be considered are (1) net national benefits, (2) treasury revenues, (3) regional employment, (4) fisheries management and (5) foreign policy goals. These goals are not mutually exclusive; one would not be surprised to find mixtures of objectives being pursued. As in any game, there exist conflicts about objectives. Foreign fleets may exploit a stock in common with domestic fleets. The common stock may be a target species or a "by catch" species. Allocations to foreign fleets may increase treasury revenue but decrease domestic producer and/or consumer surplus. The net national benefits objective would take a trade-off using equal weights. Domestic fishermen would perhaps prefer to see a much larger weight placed on domestic producer surplus. A national with pressing public finance needs for development may prefer to give higher weight to revenue to the national treasury.

A. Net National Benefits

The word "benefit" is used by economists in ways that are narrower and more specific than in everyday usage. Under a sufficiently vague use of the word, all five of our stated objectives could simply be rolled into an indefinable mixture and the outcome labelled "net national benefits". This is linguistic imperialism; the entire subject matter is appropriated in a semanticism which obscures

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1/ Cecil Graham: "What is a cynic?"
Lord Darlington: "A man who knows the price of everything and the value of nothing".
Oscar Wilde: Lady Windemere's Fan, Act III.

linguistic imperialism; the entire subject matter is appropriated in a semanticism which obscures ather than enlightens. For our purposes, net national benefits is a purely monetary measure. In general, its components include benefits to producers, consumers and the national tresury. Benefits to producers and consumers are measured by "producer surplus" and "consumer surplus", respectively. We shall have more to say in due course about these measures 2/. They are introduced here only to permit us to make a central point about the net national benefits objective. Various policy decisions concerning foreign access and fees may increase benefits to one group at the expense of another. That is, policy decisions affect the incidence or distribution of benefits as well as their aggregate magnitude. Thus, reallocation of fish to foreign fishermen may permit an increase in treasury revenue but may also cause a decrease in benefits to domestic producers (fishermen). Whether one decides in favour of such a reallocation depends, in part, on the relative weights one attaches to the components. If each receives equal weight then the reallocation would be favoured if the treasury gain exceeds losses to domestic producers. Economists usually assume that the the components of net national benefits "should" receive equal weight 3/. Under this egalitarian assumption, policies which increase total net national benefits are positive sum in that the size of the national economic pie has been increased. Such policies are often referred to by economists as "efficient".

Fees charged foreign fleets in return for fisheries access have no effect per se on domestic producer surplus or domestic consumer surplus. Such fees do increase revenues and national benefits compared to a status quo which allocations are made without charge. Consider, conversely, the imposition of a tax on domestic fishermen in a fishery which has already resolved the open access problem via individual catch rights. In such a case, the tax is a zero sum transfer to the treasury, and has no effect per se on net national benefits. If the fishery question had not resolved the open access problem, a tax is an alternative way of so doing and the fishery is, potentially, a positive sum game.

B. Revenue to the National Treasury

Fees charged foreign fleets in return for access to fisheries are attractive revenue raising devices for several reasons. From a global perspective, aggregate quota allocations by country are likely to be associated with the standard overcapitalization problem of too many vessels chasing too few fish. Fees, if set high enough, would discourage such overcapitalization. In so doing, fees would convert a zero or negative sum fisheries game into a positive sum game. Since the gains would be incident on the host nation this would also represent a gain net national benefits to the host country.

If the tresury revenue is important, then it behooves policy makers to determine how sensitive foreign demand for allocations if to fee levels or to establish a mechanism which would emulate a competitive market. In such a mechanism, participants would have an incentive to reveal their demand price for allocations.

C. Regional Employment

It is not uncommon to find fishing communities in which living standards are low and employment prospects bleak. Geographic isolation of fishing communities, and a labor force whose skills are not in high demand elsewhere in the national economy, may limit interregional emigration of labour as a solution to such regional economic disparities. Mobility is further restricted if there exist barriers to entry in alternative labour markets. Such barriers include geography, minimum wage, guild type restrictions, ethnic or regional animosities etc. For a variety of reasons, nations may prefer to look to local natural resource industries, including fisheries, to alleviate regional employment problems. When this take the form of vessel subsidy programmes, new fishermen may be helped to the detriment of existing fishermen and the taxpayer. Such subsidies are negative sum transfer payments under the economic efficiency or national benefits objective. Foreign fees, construed broadly, can be part of alternative policies for regional employment.

2/ See subsequent discussion or, for now, read "benefits to producers" and "benefits to consumers' surpluses".

3/ Adding components to obtain total net benefits is an intuitive common sense, routine operation. It is easy to overlook the fact that it assumes an egalitarian value structure, that is, all potential beneficiaries are to be regarded as equally deserving of benefits.

If we assume that foreign fleets are distant water fleets with on-board processing capability and motivated by profit it is of interest to consider their reactions to access fees. The fish they desire can be caught by their own vessels or by those of the host country via "over the side " sales and/or "joint ventures". If domestic fishermen pay lower fees (zero fees included) then domestic catcher vessels have a competitive advantage, other things being equal, over foreign catches vessels. Of course, other things are rarely equal; domestic vessels may suffer from disadvantages. Nevertheless, as the foreign domestic fee differential is increased it may reach a level at which it offsets any other competitive disadvantages which the domestic vessels may have. At this fee differential or higher, foreign processing vessels have an incentive to procure their fish via domestic catcher vessels; thereby stimulating local or regional employment. Alternatively, fees may reach a level at which the producer surplus of foreign vessels is exhausted so that their demand for allocations effectively drops to zero. Analogous reasoning suggests that a fee structure which penalizes processing vessels might, in the long run, stimulate foreign investment in domestic processing infrastructure. This development of domestic processing capability could contribute to regional employment via onshore employment in processing and also via more domestic catch vessels. Note that this stimulus toward regional employment exists without necessarily diverting treasury revenues into subsidies for the domestic fishing industry. Such a diversion would be an additional stimulant but, as noted earlier, it would be a negative sum transfer payment. Under the net national benefits objective one would compare the total benefits - treasury revenues from fees and domestic producer surplus and select the policy which yielded the greatest total benefits. If potential treasury revenues exceeded the potential benefits associated with domestic fisheries development, then under the net national benefits objective one would choose to forego regional employment increases associated with fisheries development. Conversely, if fisheries development is chosen despite conflicts with the net national benefits objective, the choice would reveal that some benefits are more equal than others. By posing the trade-off in this manner it is possible to rationally evaluate the cost of regional employment increases in terms of treasury revenues foregone. If it costs, let us say, $1,000 in annual treasury revenue foregone per job created, one may favour the employment objective. Conversely, if it costs, let us say, $50,000 annually per job created, then policy makers may regard this as a steep price to pay given other demands on treasury revenues.

D. Fisheries Management

It has been suggested by various scholars, and, less frequently, by industry representatives, that selective taxes be used to channel fishing effort away from overfished species toward less heavily utilized species. The rationale of this suggestion applies equally well whether the fishing is done by domestic or foreign fleets. It is frequently the case that foreign fleets will catch many species of fish besides the target species. The non-target or "by-catch" ratios are usually subject to some influence via gear selectivity and fishing strategy. They are also, for a given vessel, subject to great variability. The host country may place restrictions on by catches for species which it wishes to reserve for itself. Such restrictions may be knife edged", such as vessel quotas. Alternatively, it could levy by-catch fees. The problem with "knife edged" mechanisms such as by catch quotas is that, a given vessel may have too much by-catch due to random variations in catch rates. If survival rates of discarded fish are low, it makes little sense, economically or biologically, to require that the excess be discarded. What is needed, instead, is a more delicate mechanism; one that removes the economic incentive to catch the by-catch species and yet leaves a small incentive to keep catches which are excessive due to random events. Fees could provide such a mechanism in at least some cases. In point of fact, the quota system for managing by-catches is a somewhat bizarre form of what is proposed. The violator of quotas pays a fee which is termed a "fine" or a "penalty". The principal differences are (1) semantic and (2) the level of fees-whether intended to be punitive or merely sufficient to provide the desired incentive. A more flexible schedule might charge a modest fee for by-catches within, let us say, 0.5 standard deviations of the mean. For catch rates which deviate by more than this, fees might progressively increase in step fashion up to a level where further increases would cause skipper to discard fish rather than pay fees.

E. Foreign Policy

It is not easy to negotiate without something to exchange. Thus, any resource, including fisheries allocations is likely to be regarded by foreign affairs staff as part of their stock of negotiating capital. This negotiating capital has more purchasing power if fees are low than if fees

are high. This may mean that fees per se may not be used. Instead, allocation (or refusal to do so) of fish to foreign fleets may be a component in a larger set of negotiation issues. This foreign policy linkage makes life difficult for scholars trying to unscramble the omelet but the linkage may be inevitable. Even though the allocations be imbedded in a larger set of foreign policy issues, it is still desirable that negotiators have a good idea of the value of the allocations being decided so that informed decisions can be reached.

III. PRODUCER SURPLUS AND POTENTIAL FEES

The potential fees which can be levied for fishing access are derived from the concept of "producer surplus" or "economic rent". These are equivalent terms but I prefer the former because of similarity with the analogous concept for benefits to consumers; viz. "consumer surplus". In both concepts we recognize that resource users or buyers of commodities value the use or the purchase at least as much as they had to pay to exploit the resource or buy the commodity. This recognition derives from the simple behavioral axiom of voluntary exchanges. The axiom is that under conditions of voluntary exchange, people do not expend more (usually less) for an access privilege or purchase of goods and services than said privileges or commodities are worth to them.

The general definition of producer surplus is the difference between total revenue and the opportunity cost of all inputs used to generate that revenue. In fisheries, certain complications must be recognized. I propose to do this sequentially; that is, by considering a sequence of examples beginning with the simplest (and least realistic) case initially. To make the discussion more concrete, Table 1 has been prepared which illustrates typical cost and earnings results for an hypothetical fishing vessel. The particular cost items and their magnitudes would differ between applications but this Table will suffice as an example to illustrate the principles we are following.

A. Case 1: The Simplest Case

The first case is the simplest in which all paid factors of production receive their opportunity cost 4/. In this case, recorded costs equal opportunity cost. A cash payment of $22,000 to the skipper/owner as compensation for the opportunity cost of his capital investment is such an example. Under these assumptions, producer surplus is the same as profits which are -$9,000. This measure of profits does not correspond to common accounting procedures. Instead it is an economic concept of profit - the residual return to risk bearing after all cost of production have been substracted.

Before proceeding to more complex cases it is noteworthy that this negative profit margin is misleading as we will see in due course. This result also illustrates a problem to which we shall return viz., that producer surplus is, in part, dependent upon the catch per unit effort and hence upon the total amount of effort granted access. In considering granting access to "one" additional vessel we should at least measure the tradeoff between the additional fee revenue which the entrant would yield and the fact that his entry will reduce (by a very small amount) the producer surplus of all existing vessels. When added across the whole fleet the net result could actually be a reduction in potential fee revenue. Let us pursue this possibility via an example.

B. The Effect of Fishing Effort on Fee Potentials in the Simplest Case

The illustrate the sensitivity of fees to fishing effort, let us assume a virtual population model in which total fishing effort and hence fishing mortality are reduced from 1.1 to 1.0. This would produce a 5.2 percent decrease in catch and a 3.4 percent increase in catch per unit effort. With an aggregate demand price flexibility of, let us say 0.5, gross revenue per vessel-year would increase by 6.1 percent. For our representative vessel, this change would have significant repercussions. Gross stock would increase from its current level of $329 thousand (Table 1) to a new level of $349 thousand per vessel-year. Gross crew share would increase; the details depending on the lay system.

4/ The concept of opportunity cost is discussed below when it is used to adjust numbers in Table 1.

A typical "broken" lay system involves deduction of trip expenses from gross stock. The residual is then split between crew and vessel. Typically, trip expenses include fuel, food and ice. However, the details of what trip expenses are shared vary between vessels. Moreover, some vessels operate on a "clear" lay - trip expenses are not deducted before calculation of shares. For illustrative purposes we assume a broken 41 lay.

Under this assumption, trip expenses of $70 thousand are deducted from the new gross stock of $349 thousand to obtain $279 thousand per vessel-year available for share distribution. Gross crew share would increase by 7.8 percent from $153 thousand to $165 thousand. New crew share would increase from $132 thousand to $144 thousand. The net crew share per man would increase to $29 thousand; an increase of 12 percent. Assuming a constant bonus results in a total crew share per man-year of $30 thousand.

The gross boat share would also increase by 7.5 percent to $114 thousand per vessel year. The net boat share would increase by 62 percent to $21 thousand per vessel-year.

The captain's share as a crew member would increase to $29 thousand. Assuming no change in bonus, the total captain's share would increase by 5.3 percent to $40 thousand.

In terms of financial performance indicators, the return to capital increases by 62 percent to a new level of $21 thousand per vessel year. This represents a 6 percent average return on investment versus the old level of 4 percent. The owners total factor income increases by 20 percent to a new level of $61 thousand per vessel-year. The owners return to labour and management increases by 34 percent to $39 thousand per vessel-year. Profits increase fom -$9 thousand to +$1 thousand per vessel-year. Thus, a seemingly "small" reduction of about 10 percent in total fishing effort has caused a substantial improvement in profits. This is only the beginning of the story, fortunately since we still do not appear to have much of a fee potential. To progress further however, we must disgress into the concept of "opportunity cost".

C. Opportunity Costs and Their Implications for Potential Fees

Whenever an individual chooses to do something, he chooses not to exploit one or more other mutually exclusive opportunities. The economic gain associated with the (best) opportunity not exploited is an "opportunity" cost. It is part of the real cost of the alternative chosen. This concept appears in economics under many guises. For example, if a crewman can earn $20 000 in on-shore employment then this is his opportunity cost of fishing. Unless the net crew share per crewman is at least as great as this, a crewman is paying a monetary cost in exchange for an item of consumption enjoyment - the satisfaction or job preference associate with fishing. If the net crew share exceeds opportunity cost the excess is a combination of a factor rent and a premium for absorbing greater income variance in fishing. Here, the idea is that payments in excess of that required to obtain the supply of a factor of production (in this case, labor) represent a form of "surplus" payment. It is termed a factor rent. Note that, job and risk preferences aside, factor rents will equal the difference between opportunity costs and factor payments. Thus, for our simplest case in which we assumed that all inputs were paid their opportunity costs, factor rents were, by assumption, zero and producer's surplus reduced to profits. Next we need to relax this assumption.

Suppose that the annual opportunity costs of a crew and captain are $ 20 and $ 30 thousand per man-year, respectively. Then each crewman in our simplest case is receiving an annual factor rent of $27-$20 = $7 thousand. The captain receives an annual factor rent of $38-$30 = $8 thousand. Thus, instead of a residual return over the opportunity cost of capital, our producer surplus consists of the sum of factor rents accruing to capital (i.e., profit), labour (crew) and management (captain). Table 2 illustrates application of these concepts to our representative vessel for status quo effort levels and for a 10 percent reduction in effort.

Note how crucial it is not to confuse accounting "profits" of the vessel with the economic concept of producer surplus or total factor rent. Obviously, if our hypothetical vessel were charged fees of $27 thousand, it would not be possible for the owner to pay such fees with the status quo remuneration system. The remuneration system would have to be renegotiated. This would suggest that fee increases should be phased in gradually to allow time for internal renegotiation of terms.

Note, also how sensitive producer's surplus is to the total amount of fishing effort. This is a crucial point, for, if past history is any guide, failure to recognize this will result in fee potentials being driven to negligible levels. By negligible levels we mean levels that are so close to zero that the revenue potential does not justify the information and enforcement costs required to attain such precision in data 5/.

It is also worth noting that by introducing opportunity cost and total factor rent, we have finessed the need to have very precise details on lay systems. Instead, what is needed are opportunity costs of crews and captain. Since lay systems exhibit a large number of permutations, this is an important simplication which enables us to revert to more readily available labor statistics and to readily applied procedures of budgeting.

D. Multilevel Planning Aspects

It is often convenient and useful in economics to use the concept of a "central decisionmaker." in so doing it behooves us to keep in mind that in political economy there is no such entity; it is a deliberate analytical abstraction. The simplest manifestation of this appeared in discussing potential fees vs. remuneration systems. Clearly, a host nation does not "control" remuneration systems on sovereign foreign vessels. This is a very simple case however and it was implied that one can rely on the reactions of participants to renegotiate the terms of the remuneration system. It was also suggested that such renegotiations may take some time for participants to work out.

A more important illustration arises in connection with mobile distant water fleets. Such fleets will, presumably, compare the residual producer surplus (net of fees) available in alternative fishing areas of the world. This residual must be left positive as an inducement to renegotiate lay systems internally. A host nation which tries to extract the total producer surplus may find such fleets reacting in a rational way by going elsewhere. This can be a complication which simplifies the information problem. Under such circumstances, fine detail about the economics of vessels may be largely irrelevant; a comparison of gross stock obtainable in other host countries may be all that a host nation need to derive approximate estimates of rational fees (Meuriot & Gates, 1982). Note that opportunity cost has crept in here in another guise. In this instance, the relevant (opportunity) cost of fishing in one host fishery is the potential earnings foregone in another.

Fees may also be used to influence fishing strategy and alter species composition. To achieve these ends, fees must be levied, at least in part, on a poundage basis and must be accompanied by an on-board inspection programme. Alternatively, fees might be charged on a vessel-day or vessel-month basis with or without by-catch restrictions. With no by-catch restrictions, potential fees are higher and enforcement costs lower since a statistical monitoring programme is all that is needed to determine catch composition.

Fees may also be used to encourage on-shore development of processing facilities. Fees levied on catches or catcher vessels encourage the substitution of domestic (fee exempt) catcher vessels. If fees were levied on processing vessels they might also encourage substitution of on-shore domestic processing plants for processing at sea.

IV. ESTIMATION OF POTENTIAL FEES

In general, three classes of methods exist for estimating potential fees. The first of these is an auction which is also a method for implementing or collecting fees. In a situation where there is a large number of potential buyers and no collusion among buyers, an auction is an ideal system in that the desired end may be attained at low cost. Certain difficulties may arise however. Where the number of bidding agents is small or the market structure facilitates collusion, the bid price may be far less than the potential value. Consequently, even if an auction is used it may prove desirable to administratively value foreign allocations as an independent check on market performance. Where multiple objectives (for examples diplomacy, regional development, fisheries management) intrude it may be difficult to couple a market auction with a pricing policy consonant with these objectives.

5/ As fee potentials approach zero, knowledge of their magnitude becomes economically unaffordable.

If an auction is not used, administrative valuation procedures may be applied. These procedures include statistical and synthetic methods. Under appropriate circumstances, statistical methods (in particular, multivariate regression methods) enable one to infer willingness to pay from past observations on fees and participation rates. The techniques have proven useful in numerous economic applications from estimating cost functions to estimating willingness to pay of recreational fishermen. The sine qua non of statitical methods is the existence of a data set; either cross-sectional on time series or both. Thus, it is probable that the usefulness of these methods will increase with the passage of time as data is accumulated on foreign fee transactions. However, the fact that many extraneous factors may enter the negotiations over terms means that unscrambling observations ex post may prove a difficult exercise in econometrics.

A variant of this approach is exemplified in a recent study by Crutchfield (1983). This study measured benefits to consumers (consumer surplus variations) and, in so doing, finessed some of the complexities just discussed. A premise of the approach is that the government of the recipient nation is motivated by consumer welfare and would take actions including fleet subsidies, if necessary, to preserve consumer welfare. However, the ubiquity of trade barriers suggests that consumers receive less weight than industry. Furthermore, the willingness of governments to subsidize fleets need bear no relationship to net national benefits whether they be comprised of consumer or producer surpluses. This willingness of governments to engage in negative sum games implies that potential fees could even exceed the rational measures we have been describing; i.e., net national benefits.

Synthetic methods include such informal methods as budgeting or the "economic engineering" approach. This method is exemplified by our Table 1. A more formal extension of these methods is mathematical programming. An example of the application of these methods to the problem at hand may be found in Meuriot and Gates (1982). In these extensions it is possible to explicitly model the reactions of fishing fleets to fees, by catch quotas, etc.

The principal advantages of synthetic methods are that such methods are "forward looking" and allow the analyst to include all the information at his disposal. The ability to include information of varying degrees of certainty cuts both ways. When subjective information is included results are consistent with subjective knowledge. However, the extent to which such results mirror the objectives world depends on how good the information was.

These methods also presume that fishing fleets are motivated by the measure of economic gain outlined earlier, viz., producer surplus. While this assumption is perhaps never exactly true it is a very useful first approximation which is used widely in economics.

We have reviewed auctions, and administrative methods of valuation for foreign fees. No suggestion has been made that any method is universally superior. Rather, the advantages and disadvantages of each were indicated. In the final analysis, fees will inevitably require informed judgement and analysis of the reactions of fleets. Precise measurement of willingness to pay is not a free good; trade-offs will be needed between the gains versus the costs of attaining greater precision.

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Table 1

Cost, revenue and financial performance information
for a representative vessel

	Mean value ($1,000/year)
1. Gross revenue (Stock)	329
2. Operating costs:	
Fuel	53
Food	9
Ice	8
Repair and maintenance	17
Insurance	14
Payroll taxes	6
Welfare and pension	7
Lumping (labour costs for off-loading fish)	4
Wharfage	0.5
Gear and supplies	18
Licences	0.7
Truck	1
Office	0.3
Clerical and Legal	1
Travel	1
Sub-Total :	141
3. Shares:	
a. Crew :	
Gross crew share	153
Net crew share 1/	132
Net per man	26
Crew bonus	1
Total per man	27
b. Boat Shares :	
Gross boat share	106
Boat operating expenses	77
Vessel quasi-rent 2/	29
Depreciation	16
Net boat share	13
c. Captain :	
Captain's crew share	26
Captain's bonus	11
Total	38
4. Capital stock	364

	Mean value ($1,000/year)	
5. Financial performance indicators:		
Opportunity cost of capital	22	6%
Return to capital 3/	13	
Owner's return to labour and management 5/	29	
Owner's opportunity cost	38	
Owner's total factor income 4/	51	
Profit 6/ Total	-9	
Percent		2%

Notes:

1/ Net crew share = gross crew share minus fraction of trip expenses (fuel, food, ice) paid

2/ Vessel quasi rent = amount left for interest and depreciation

3/ Return to capital = net boat share

4/ Owner's total factor income measures nets returns to capital, labour and management factors involved in vessel operation. It is the sum of boat share and the captain's share. Its meaning is obvious for owner-operated vessels. For vessels with self-financed absentee owners, this measure includes payments accruing to different people. For owners who are partially or wholly financed by non-equity capital, a portion of this measure is paid as interest to the financial sources.

5/ Owner's total factor income minus opportunity cost of capital

6/ Profit = owner's return to labour and management minus owner's opportunity cost

Table 2

	Status quo annual rent	With 10% effort reduction
	(in thousands/vessel-year)	
Capital	-9	1
Labour	28	36
Management	8	10
Total rent = Producer's surplus	27	47

ANNEX 8

A STUDY ON FEES AND OTHER ECONOMIC BENEFITS FROM FOREIGN FISHING ACCESS TO THE FISHERIES OF EXCLUSIVE ECONOMIC ZONES OF THE STATES PARTICIPATING IN THE SOUTH PACIFIC FORUM FISHERIES AGENCY

by

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1. INTRODUCTION

1.1 Aim of the Report

This report was compiled for the purpose of the April 1983 meeting of the Expert Consultation on Conditions of Access to the Fish Resources of the Exclusive Economic Zone, a consultation organized by FAO in preparation for the World Conference on Fisheries Management and Development. The report analyses the types and levels of benefits being derived from foreign fishing access by States participating in the South Pacific Forum Fisheries Agency (FFA).

1.2 Background

That Agency was set up by the South Pacific Forum States in recognition of their common interest in the utilization of marine resources in the South Pacific region. Through the activities of the Agency, these States have steadily pursued a course of regional cooperation and coordination in respect of fisheries policies.

The member States of FFA are: Australia, Cook Islands, Fiji, Kiribati, the Federated States of Micronesia, Nauru, New Zealand, Niue, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, Vanuatu and Western Samoa. Palau and the Marshall Islands also participate in the affairs of FFA as observer States.

The Agency currently is involved in the preparation, negotiation and implementation of arrangements for access to the fish resources of the fisheries or exclusive economic zones of the participating States. The fisheries or exclusive economic zones of these States cover the major area of the southern western and central Pacific. The only areas in the region involved in access arrangements which are not covered by FFA are those of the French Pacific territories - New Caledonia, Wallis and Futuna, and French Polynesia.

2. FOREIGN FISHING OPERATIONS IN THE FFA REGION

2.1 Introduction

With the exception of New Zealand and Australia, the FFA States have made arrangements for foreign fishing access almost solely to the resources of skipjack, tuna and related species. These resources have traditionally been fished by Japanese, Korean and Taiwanese longline fishermen, and by Japanese pole and line fishermen. More recently, there has developed a rapidly expanding purse seine fishery involving Japanese, Korean, Taiwanese and USA fishing interests.

2.2 Japanese Sashimi Longline Fishery

The South Pacific region is a major fishing ground for the Japanese longline fleets. These include some 1,500 vessels of the nearby and distant water fleets ranging in size from 20 gross registered tons to over 300 gross registered tons. An unknown number of smaller vessels also fish in Micronesian waters.

These vessels target for deeper swimming tunas and billfish for the Japanese sashimi (raw fish) market. Typically, the three most valuable species of tunas (southern bluefin, bigeye and yellowfin) make up around 85 percent of the volume of the catch of the sashimi longline vessels in the fishery zones of FFA States.

The catches of the sashimi longline vessels are for the most part deeply frozen (to around -55°C) are handled with great care and are marketed as a relatively high quality product for the Japanese consumer market.

Some Korean vessels also participate in this fishery, catching tuna and billfish for the Japanese sashimi market with the support of several large Japanese trading houses.

Since, around 1974, the number of vessels in the fleet and their aggregate catches have remained fairly stable.

More recently, however, the returns of Japanese longlining operations have reduced for reasons variously attributed to high fuel costs, consumer resistance to higher tuna prices, an apparently emerging long-term shift in Japanese diet preferences away from foods such as sashimi and the impact of the new 200-mile fisheries zone regimes. In response, the Japanese fishing associations have recently implemented a well publicized cut of 20 percent in the capacity of the distant water longline fleet and a programme of research into improved vessel design and fishing techniques aimed at improving efficiency in operations and restoring profitable market conditions.

2.3 Korea/Taiwan Longline Canning Fishery

Through the 1950s, Japanese tuna longliners fished for canning material from foreign bases in the region, notably from Pago Pago. As freezing technology improved, however, the sashimi market provided increasingly attractive returns and the Japanese longline fleet transferred to the sashimi fishery. As the Japanese longline fleet withdrew from the fishery for canning material, it was progressively replaced by the developing Korean and Taiwanese fleets.

Today, the numbers of Korean and Taiwanese vessels operating in the South Pacific are themselves declining sharply as albacore prices fall and fuel and wage costs rise.

2.4 Japanese Purse Seine Fishery

The Japanese single purse seine fleet (comprising vessels of around 500 gross tons) expanded from 11 vessels reporting a catch of 24,000 tons in 1972 to 32 vessels reporting a catch of 85-90,000 tons for 1982. In 1983, the first full year of operation of the expanded fleet, the catch is likely to exceed 110,000 tons. In addition there have been seven 116 gross ton group seiners which fish with their own carriers and have been licensed to fish seasonally in southern waters for skipjack.

The Japanese purse seine fleet reports taking slightly less than half of its catch in the waters of the fishery zones of FFA States. The composition of its catch in FFA States' waters is approximately 70 percent skipjack/30 percent yellowfin. After the profitable period of expansion, returns to this fleet appear to have fallen recently. An increase in trip lengths as catch rates have fallen and falling skipjack prices have been only partially compensated for by a higher proportion of the more valued yellowfin in purse seine catches than was anticipated.

Purse seine skipjack is used by the katsuobushi (smoked-dried fish) manufacturers, the canning industry for export or exported frozen to the world canning market (mainly to the USA). Much of the purse seine yellowfin catch is exported for canning, especially to Europe.

The size of the Japanese purse seine fleet is for now effectively limited to the present number of 32 single purse seine vessels by Japanese Government regulation.

2.5 United States Purse Seine Fishery

The activity of the United States purse seine fleet in the region has been expanding rapidly. These vessels deliver skipjack and yellowfin for canning to Pago Pago or San Diego. There is currently a significant transhipping operation through Guam. Typically, these vessels have a carrying capacity of around 1,200 tons of fish. The major fishing grounds in the region have been in the area between the Federated States of Micronesia and Papua New Guinea. More recently, there has been more interest in fishing in the eastern part of the region. That trend is likely to be strengthened with the participation of Kiribati in a joint agreement with Palau and the Federated States of Micronesia providing for access for the vessels of the American Tuna-boat Association to the fisheries or EEZs of those three States.

In the last three years the fleet has expanded from less than 20 US purse seine vessels operating during 1981, to around 25 vessels operating in the region during 1982, and over 40 vessels may operate in the region during 1983.

2.6 Other Purse Seine Fleets

With the decline of the Korean and Taiwanese longline fleets, those governments have encouraged the Korean and Taiwanese fishing industries to invest in purse seine fishing. Currently, up to ten of these vessels are known to be operating in the region, most of them landing their catch for transhipping through Guam. In addition, there has been sporadic interest in tuna purse seine fishing in the region from USSR, Philippines and Indonesian fishing interests.

2.7 Japanese Pole and Line Fishery

In the early 1970s, with demand for tuna canning material booming, the Japanese Fishery Agency apparently adopted a policy of encouraging longline owners to convert to pole and line fishing, and to develop the Southern Pacific skipjack and Northern Pacific albacore fisheries. In response, the catches of the Japanese distant and nearby water pole and line fleets expanded rapidly, reaching over 400,000 tons during 1974. Since then fuel cost increases, competition from purse seiners, fluctuating albacore catches and sluggish market conditions have reduced returns to the Japanese pole and line fleet. By 1 August 1982, there were only 184 distant water pole and line vessels licensed by the Japanese Fishery Agency, compared with 306 vessels licensed in 1976. In fact, it is understood that many of these licensed vessels may now be moored, and that the size of the fleet operating during 1983 may be significantly less than the 184 licences issued.

During 1981, these vessels are reported as having caught over 40,000 tons of fish, almost all skipjack, in the fisheries or EEZ zones of FFA States.

3. COASTAL STATE BENEFITS FROM ACCESS

3.1 Types of Benefits

The range of benefits available to coastal States making arrangements for access for foreign fleets to fish in their fishery or EEZs can usefully be classified in terms of serving three main purposes:

- **Direct financial benefits:** Largely fees received (measured either in terms of gross receipts or net of expenditures required for all or part of the functions of EEZ management) but for the purpose of this discussion also including the grants of goods and services regularly negotiated with foreign fishing interests, such as those from Japan, as part of access fee payments.
- **Fishery development assistance:** Including the provision of scientific data, access to markets for fisheries products, technical assistance, direct investment, fisheries aid.
- **General development assistance:** Mostly including access to markets for products other than fisheries products and general development aid.

3.2 Access Aims of Pacific Island States

The mix of benefits sought by FFA States largely reflects the sort of pattern which is developing in other regions. Those States with the greater opportunities to mobilize resources for the development of their domestic industry have placed relatively greater importance on directing the benefits from foreign fishing access towards the development of their own domestic fishing industries - seeking data, market access, technology transfer, and often investment through joint ventures. Those States for whom the constraints of the lack of capital and skills are more severe, have more generally sought to maximise direct financial benefits, with development assistance often taking a secondary role.

For most Pacific Island States, the abundance of the resources of skipjack, tuna and related species far outstrips the fishing capacity that many of these States are likely to develop in anything but the very long term. For instance, there are only two vessels owned by Pacific Island States operating in the sashimi longline fishery, which is by far the highest value output fishery in the region. There is only one regional longliner currently operating in the albacore fishery.

Much greater resources have been directed toward participating in the surface fisheries, but even there it is apparent that the abundance of the skipjack and surface tuna resources is probably generally sufficient to sustain both the current level of foreign fishing and current expansion plans of domestic surface fishing efforts (although there is a developing concern about the increasing expense of exploitation of surface yellowfin by foreign purse seiners).

Most Pacific Island States then contemplate a fairly long-term relationship with foreign fishermen, and from this perception can probably be traced a great deal of the relatively greater effort committed by FFA region States towards developing an acceptable long-term regime for controlling foreign fishing efforts and for extracting the maximum direct benefits from that activity.

3.3 Direct Financial Benefits Received

The levels and distribution fees and related financial benefits received by FFA States for foreign fishing access are described more fully in Section 6.

In summary, aggregate access fee receipts (including goods and services components) by FFA States for access to resources of tuna and related species are estimated to have exceeded US$15 million for 1982.

3.4 Fishery Development Gains

The extent of fishery development gains accruing to coastal States in the region from the arrangements made for foreign fishing access following the extension of this marine resources jurisdiction is generally difficult to measure.

The scale of fishery development projects sponsored by foreign fishing States has certainly increased since the institution of extended jurisdictions. The projects cover a wide range of fishery activity. They have included assistance for fishery administration, fish marketing, small-scale fishery development and industrial fishery development.

There are no clear measures of the values of many of these projects, though some have been clearly worthwhile. It is rather easier, however, to make a general observation about the extent of gains flowing from access for industrial tuna fishery development. Success in the pursuit of industrial tuna fishery development has proved ellusive.

It is probably true that until now, at least, Pacific Island States have generally not been able to generate or capitalize on the opportunity for industrial fishery development which the extension of their sovereignty over their 200-mile fisheries or EEZs might have appeared to promise. The three major industrial fishery developments now operating in the region were generally planned and implemented in the period before the extended jurisdictions became a reality, though it is likely that the extension of jurisdiction protected and provided expanded development opportunities for these existing operations.

In other cases, vessels and technical assistance for industrial tuna fishery development have flowed from development assistance which is at least indirectly related to access. The fisheries involved include longlining for albacore, sashimi longlining and pole and line fishing. However, none of the operations thus established show clear signs of developing into a viable expanding operation at this time.

3.5 Wider Development Gains

The scale of wider development gains accruing from access arrangements is also very difficult to measure, since there is very little wider development aid activity directly tied to fisheries access. In part, at least, that traces to the rejection of the regional States of a tie between aid and access. Again, the pursuit of such wider developmental gains as access to markets for non-fisheries products has been more aggressively pursued by the more developed States in the region such as New Zealand.

The generation of economic benefits from contact with foreign fishing vessels provides a special case of potential developmental gains from foreign access. Again the more developed States have been more readily able to benefit from port calls, bunkering, etc., than less developed States, though significant gains in this area have accrued to several Pacific Island States.

Attracting foreign operators to tranship, thus securing potential gains in employment, export, duty and foreign exchange has also proved relatively difficult. Increasing fuel costs have certainly encouraged greater interest in transhipping operation by foreign operators, but as yet there have been relatively few instances in which it has been more profitable to tranship from a point closer to the fishing grounds, than to incur the additional handling, storage and transport costs involved in transhipping back to home ports.

4. FEE STRUCTURES

4.1 Types of Fee Structures

There are three regularly recognized bases for access fees, as:

- Lump sum payments for access for fleets
- Taxes on effort
- Taxes or royalties on catch

Various combinations of these types of access fees are also common within particular access arrangements. In practice, access negotiations under the three systems generally focus on some measure of the average value of catches per vessel taken in the zones. The major difference lies in how close the relationship is between the fee and the current catch estimates. Lump sum fees are typically negotiated in relation to the historic catches of the fleet operating in the zone. Taxes on effort are typically based on the most current estimates of the performance and unit values of the catch of average vessels of different classes, in the fleet while taxes or royalties on catch can be directly attached to actual catches.

4.2 Lump Sum Fees

Lump sum fees are still the dominant form of fee payments for access for tuna vessels to the marine resources of FFA States. The provisions relating to lump sum fees are fairly straightforward. Typically, an annual fee is agreed, in some cases with a component paid in goods and services rather than cash. The cash fee is forwarded as one or two payments. The fee may be agreed as providing for some maximum number of vessels to be fishing at one time, licensed during the year, or licensed at any one time. In some cases vessels are individually licensed, and in others they are not.

It is generally the case that lump sum fee values can be less directly tied to specific formulae than per vessel or per trip fee values. In particular, the lump sum agreements themselves do not state any specific formulae, though in some cases the agreements do indicate the lump sum fee to have been based on a declared percentage of a prescribed value of the expected catch. In some cases, however, some of the analytical factors may be set down by the parties in documents outside the agreement documents.

No direct information is usually available on the levels of payment of individual vessels contributing to lump sum payments or on the methods by which these contributions are collected by the respective fishing associations or government agencies.

4.3 Per Trip Fees

Per trip fee systems were introduced by Papua New Guinea and Solomon Islands in 1979, in response to dissatisfaction from Japanese fishing interests with the lump sum systems which those countries had been operating.

The negotiation of per trip fee systems typically involves a more detailed analysis of the average catches of vessels in the fleet by class of vessel.

As an example, the current Papua New Guinea's agreement with Japan provides for a relatively small annual per vessel payments based on the lengths of the vessels and size of the crew, and a per trip fee generally calculated as:

Catch/trip

x operation ratio (proportion of fishing days per trip spent in Papua New Guinea fisheries zones)

x duration ratio (ratio of licence duration to total duration of fishing trips)

x fee rate (5% f.o.b. levy)

x f.o.b. price in kina (calculated as Yaizu average price by species less agreed freight and handling charges)

Separate fees are set by type of vessels (longline, pole and line, purse seine) and by size of vessel. The trip fees provide a licence for a set time in the zone which may vary by type and size of vessel, and licences for extended periods are available at an additional cost.

4.4 Per Vessel Fees

Per vessel fee systems involving an annual payment by each vessel for fishing in a particular zone have generally found little favour amongst licensing States in the FFA region. States have generally preferred either the administrative simplicity of lump sum agreements, or the flexibility and the apparently potentially greater earning power of per trip systems. The only significant per vessel type systems which have operated recently are those provided for by the agreements between the American Tunaboat Association (ATA) and States of the region, and those for access to the New Zealand southern bluefin and albacore/yellowfin fishery (although the limited period for which the New Zealand southern bluefin licences are issued effectively makes them a per trip licence system).

Per vessel fees may simply be set as a single fee covering all vessels applying for access to the fishery, such as the NZ$3,000/vessel fee currently set for access to the New Zealand albacore/yellowfin fishery; or vary by vessels with a particular vessel characteristic such as the length of the vessel or some measure of the tonnage of the vessel. The agreements with the ATA are based on a fee per net registered ton of individual vessels.

4.5 Taxes or Royalties on Catches

Taxes or royalties on catches are most easily implemented where fisheries are subject to quota systems. In that case, the size of the fee can readily be calculated in advance, and extracted at any point during the period of the fishing process. Such a system necessarily requires close monitoring and control of catches, since a tax based directly on catch clearly provides an incentive to under-report catch.

Outside of New Zealand and Australia, there are no tuna or related species fisheries in the FFA region which are subject as yet to effective quotas. This, and the lack of resources available for the monitoring and control of catches have meant that no Pacific Island States have been interested at this stage in implementing royalty fee systems.

5. COMPARISON OF LUMP SUM, PER VESSEL AND PER TRIP FEE SYSTEMS

5.1 Introduction

In a recent exercise, the effectiveness of the different fee systems discussed above for FFA States were compared in terms of:

- Fee receipts
- Administration resources required
- Enforcement
- Control of the fishery

The conclusions of that exercise are summarized below.

5.2 Fee Receipts

The relative ability of the different fee systems to secure higher fees can be looked at in two ways.

Theoretically, a per trip system should in the longer term give the opportunity to extract higher fees, since:

- The flexibility of a per trip system gives the fisherman greatest opportunity to adjust his fishing patterns to the apparent abundance of fish as it changes during the year, and may thus increase the value of catches and the base for levying access fees.
- The fisherman is more sure when paying per trip fees shortly before he enters a zone that he will fish there, than if he buys options to fish at some period in advance. There should be some increase in fees associated with this reduction in risk.
- The coastal State can more finely adjust fee structures to the apparent capacity of different classes of vessel to pay when it is charging vessels directly and for each trip.

In practice, it may be difficult or impossible for coastal States to extract the apparently greater benefit available because of:

- enforcement problems; or
- lack of knowledge - the representatives of the foreign fishing operations may indeed be better placed to understand relative capacity to pay; and to adjusting payments for different vessel classes, etc.; or
- weak negotiating stances.

In addition, there may be some financial loss from having per trip fees flow in through the year compared with receiving a lump sum up front. Assuming the per trip fees are evenly distributed through the year (while a lump sum would be received at the beginning of the year) and a 10 percent interest rate, the average loss from a per trip fee system would be around 5 percent of the value of fees.

Indeed a review of experience in two countries which had shifted from lump sum to per trip system showed that in both cases fees received dropped after the introduction of per trip systems. Fee receipts by these two States have now recovered to beyond the levels of the lump sum agreements earlier received, although in 1981 they appeared to be still less than they would be if they had increased at the rate of the other lump sum agreements in the region.

Alternatively, the practical value of per trip and lump sum systems can be looked at in terms of the fee rates which they currently extract. Again, a comparison of the values of fees received as a proportion of the values of reported catches by States with per trip and lump sum systems showed returns from per trip systems to be consistently lower than returns from lump sum systems.

The value of a straight per vessel system in generating fees seems to depend criticlaly on the diversity of fishing patterns among the vessels licensed in each zone. If fishing patters are fairly common among the vessels in terms of trips per year and proportion of catch per trip taken in the zone, and if the fishery is not subject to substantial annual overall shifts (the southern bluefin fishery is perhaps an example) then a per vessel fee system becomes closer to a per trip system with the attendant advantages and disadvantages.

The more diverse the fishing patterns, and the more subject to fluctuations is the fishery, the closer is the straight per vessel fee system to a lump sum system. In fact, in those circumstances a straight per vessel system may generate lower fees than either lump sum or per trip - deterring casual or uncertain fishermen through fees set to represent the average or fairly intensive fisherman in the zone, without the power of the lump sum system to encourage the associations to get at least some casual or uncertain fishers to contribute.

Uncertainty of Receipts

The fees to be received from lump sum agreements are known in advance. Where fees are a significant proportion of total government revenue or of the revenue of a single government agency, that may be an important factor-providing a surer base for forward planning.

Per vessel and more particularly per trip fees expose the recipient coastal State to the risk of changes in fees receipts from those projected. Fees may be higher or lower than expected.

5.3 Administration Resources Required

The administration of a per trip fee system generally requires greater administration resources arising from:

- A greater flow of communications between the licensing State and the vessels and associations. This can be expected to require more staff and cause higher postage and telecommunication costs.
- The greater effort which is generally considered to be required to monitor individual vessel movements and catches under per trip systems
- The greater amount of analysis which may arise from the increase in the number and detail of factors to be covered in negotiations (such as trips per year, vessel capacities, fishing days by vessel class, etc.)

However, the application of this conclusion that a per trip system costs more to administer can vary widely for particular zones. Some States adopt a more analytical approach than others, whether they have lump sum or per trip systems. Other States have different degrees of monitoring independent of the type of agreement. Australia, for example, monitors individual Japanese vessel activity very closely under its lump sum agreement.

A recent study of the actual outlays by several States in the region for the administration (excluding enforcement) of foreign fishing agreements concluded that, if the States which currently operate lump sum systems for large fleets switched to per trip systems, they would require significantly greater administration resources. The study also recognized the administrative economies which might flow from a centralized, licensing authority and centralized receipt and analysis of catch/position reports and logsheets.

5.4 Enforcement

It should be apparent that in the long term the issue of compliance with agreements is substantially independent of fee system. If there is a likelihood of substantial under-reporting or illegal fishing, then having an effective enforcement capability is likely to improve compliance and having no enforcement capability will encourage evasion, whatever fee system is operating.

The compliance/enforcement effects of different fee systems are then a matter of degree and principally arise from:

- Compliance control exerted through associations. To the extent that associations are responsible for payment of fees, the burden of collecting fees from those fishing falls on the association.
- Pressure from other association members - the 'if you fish without contributing to the lump sum, I have to pay more' effect.
- Ease of enforcement. It takes more effort to advise enforcement authorities of vessels currently permitted to fish when that list changes from week to week as vessel trip licences are taken out or expire, than when there is a set group of vessels licensed for the whole year.

These effects may well be real, but equally they may only be significant in the short term. If fishermen are predisposed to poach in zones where they observe enforcement to be ineffective, they can be expected over time and to some degree to express their unwillingness to pay for access to those zones to their negotiators. In that case, their unwillingness to pay is likely to be seen as reducing the fee paid and not coming out of the pockets of other fishermen. This would reduce the compliance effects of lump sum systems over time. Such effects are likely to be systematic, in that those who fish the zone intensively or have larger, more expensive operations at stake, may be more willing to accept the fee payment.

5.5 Control

In that lump sum agreements have often involved less direct regulation of individual vessels by the coastal State they have often consequently appeared to give less control over the fleet then have the per trip type systems.

Again, the effectiveness of fleet control should largely be independent of fee system. With a per trip system it is necessary to monitor movements more closely, but equally a close monitoring regime can be instituted under a lump sum system. Vessels can still be licensed individually and can be required to meet as equally stringent reporting or other requirements under lump sum system as under per vessel or per trip systems.

5.6 Individual Zone Comparison

Fisheries administrations switching to per trip fee systems can expect a drop in fees in the short term, but are likely to have the potential of earning more in the long term, depending on their ability to extract it. That ability is probably most closely related to their enforcement capability. Administration costs will rise significantly, and there may be more illegal fishing, if only in the short term.

As might be expected, FFA States generally seem to have adopted the system which suits them best. Papua New Guinea and Solomon Islands have found it effective to employ per trip systems for licensing the small, relatively homogeneous fleets of Japanese vessels which fish in the relatively compact areas of their zones within the limits of their enforcement capability.

In New Zealand and Australia, each with fairly well-developed enforcement and administrative controls, there seems to be relatively little difference. Australia has opted for the convenience of a single payment and the policy of selling the option to access while New Zealand appears to have sought to maximize gross financial returns.

The Micronesian States (Palau, Federated States of Micronesia and the Marshall Islands), Kiribati, Tuvalu and the Cook Islands clearly recognize lump sum systems as serving them best because they are dealing with larger fleets and more diverse fishing patterns. They also lack the more efficient communication systems (such as telex), are relatively short of skilled administrative staff, and have relatively large zones to regulate with relatively little enforcement capability at this time.

6. FEE RECEIPTS

6.1 Aggregate Fees

During 1981, FFA States are estimated to have received over US$13.5 million fees for access to resources of tuna and related species. Features of the composition of these aggregate fee receipts are:

- **By fee type:** 60% of the fees were received from lump sum type agreements. The balance was received from per vessel or per trip type agreements.
- **By country of origin:** 90% of the fees were paid for fishing access for Japanese fishermen.
- **By fishing methods:** It is estimated that over 70% of these aggregate fee receipts were made for access for longline fishing vessels (assuming that the lump sum receipts are roughly distributed to fishing methods by the relative values of catches made under the lump sum agreements).

For 1982, aggregate fee receipts by FFA States for access to resources of tuna and related species are estimated to have exceeded US$15 million.

6.2 Catch Valuation

In general, the relative values of fees generated by different fisheries can be measured in terms of the values of fees received in relation to the values of the catches taken. Valuing the catch taken requires two measures:

- The size and composition of the volume of the catch
- The unit values of the categories of fish making up the catch

Currently, there are three sets of catch data generated by vessels fishing in the fisheries or EEZs of the FFA States. These are:

- Daily logsheet information submitted for periods spent within the zone of FFA States. A uniform logsheet is used by all participating States. Almost all the logsheets are now analysed by the South Pacific Commission.
- Regular current catch on board and position information reported by vessels entering or existing the zones of FFA States and at regular intervals while fishing within those zones. This requirement for regular current reporting of catch and position is one of the harmonized access conditions agreed between FFA States. That requirement is currently largely implemented in the various foreign fishing agreements which apply throughout the region. The information is now sent to the various countries involved by the fishing vessel or its owner or the fishing association of which it is a member. In future, it is likely that these data will be increasing relayed to FFA and analysed there.
- Logsheet data submitted to the fishing agencies of their home countries by foreign fishing vessels. From these data the Japanese and Taiwanese Government fisheries agencies publish the estimated aggregate catches by their fleets by month and by area of fishing ground.

While there are always difficulties with regard to the validity of logsheet data submitted by fishermen, the availability of these three data sets provides a reasonably rigorous basis for the estimation of the size and composition of catch volumes.

Obtaining reasonable and fair estimates of the unit values of the various classes of fish taken can involve some rather more difficult issues. There are two structurally different markets through which the skipjack, tuna and related species taken from the region are sold.

Prices for fish sold to large scale canners are usually set under comprehensive price agreements covering all sales from the fleets to the canners (though the disrupted market conditions recently have caused some breakdown in these price setting arrangements). In general, these prevailing price structures are fairly well known and can be used, with a degree of caution, to provide reasonable estimates of the landed values of catches taken by those fleets delivering fish for canning.

Estimating the unit values of fish sold through more complex marketing procedures, such as generally prevail in Japan, can provide greater difficulties. There, the market evaluation of skipjack and tunas, particularly for the sashimi market, is highly discriminatory. Prices of fish of the same species vary widely, depending on the consumer and wholesaler evaluation of the quality of the flesh. The evaluation of the quality of the fish is related to factors including the fishing ground of its origin, the temperature of the waters from which it was taken, the size of the fish, season at which it was taken, the manner in which it has been handled and the quality of the freezing equipment from the vessel which delivered it.

The most readily available information of the landed value of tunas and related species in Japan is the published estimates of the average monthly market values by species of fish from the major landing ports in Japan. In the past, data on sales at Yaizu, a major skipjack and tuna port, have been most widely used to estimate the unit values of fish taken under foreign fishing access agreements by Japanese skipjack and tuna boats. There are three particular problems with the use of Yaizu data in this way:

- Until recently, data from Yaizu measured average prices by species but not by method of capture. This was particularly significant for deriving estimates of the value of longline yellowfin, which contributes by far the greater part of the value of longline catches in the FFA region. The expansion in landings by the Japanese purse seine fleet has largely been concentrated on Yaizu, so that for 1982 it seems likely that some two-thirds of the yellowfin landed at Yaizu will have been delivered from purse seine vessels. Since the value of yellowfin for canning material is substantially less than the value of yellowfin for the sashimi market (the average price for yellowfin for canning is around 300 yen per kilo, while the average price for yellowfin for sashimi use is closer to 700 yen per kilo), the average Yaizu yellowfin price is heavily weighted downwards by the value of deliveries from purse seine vessels. More recently, there have been data available from Yaizu giving prices for longline and purse seine yellowfin separately and for pole and line and purse seine skipjack separately.
- The prices at Yaizu seem for some species at least to differ systematically from the prices paid at such other major ports as Misake and Shimizu.
- Average price data may not reasonably reflect the value of fish from specific fishing grounds. In particular, the market evaluation of fish from the South Pacific region may generally be lower than average.

It is hoped to study these various factors, with a view to making a reasonable and fair estimate of the relationship between the value of fish taken from FFA States zones and the published average Yaizu price data. For now, however, the average Yaizu data by method of capture seems to provide the best available general measure of the values of fish by species and by method, and is being used in FFA analyses. It is recognized that, if anything, this may over-estimate slightly the estimated value of catches.

In the process of negotiating access fees, there has also been regular discussion about the relative merit of valuing fish on the basis of the estimated value f.o.b. at fishing grounds compared with the average market value at the point of landing. Current practice varies, but landed market values are now generally more widely used.

6.3 Fee Rates

From the discussions over time about the appropriate base for deciding on rates of fees for access for foreign fishing vessels to the resources of skipjack, tuna and related species in the fisheries or EEZs of FFA States, three major principles have been variously put forward:

- The capacity to pay off the existing fleet
- The economic rent which might potentially be available from the fishery
- The relative returns which might be generated by a national fishing effort, noting in particular the rates of export duty on frozen fish which range in the region from 4 to 10 percent.

In practice, foreign fishing interests have generally accepted fee rates in the region of 3.5 to 4 percent, while the coastal States in the region have collectively resolved to set fee rates up to 5 percent of the landed market value of the catch.

A study of actual fee receipts for the calendar year 1981 of FFA States showed actual fee rates of return ranging from around 2.2 percent to over 5 percent of landed market value, assuming known price structure for cannery - bound product and average Yaizu prices by species by method for Japanese market product.

The relatively low levels of these fee rates can be traced to:

- The lack of any real scarcity value to the licences purchased - apart from the southern bluefin fishery operated in New Zealand and Australia, there are almost no effective quotas or limits on catch or effort associated with existing licensing arrangements.
- The small number of buyers for licences, with the foreign fishing interests generally strongly organized into a few buying agencies, often under strong government influence.
- The relative large number of sellers of licences, which has in the past provided scope for foreign fishing interests to choose from a number of licence sellers, and even at times to play sellers off against each other.
- The currently relatively unprofitable nature of distant water fishing operations.
- The relative weakness of surveillance and enforcement efforts available to ensure compliance with agreements.

At most, fee rates can be expected to rise gradually over time. The rates of any increases in the shorter term are likely to depend most on the extent to which changing market conditions or regulatory measures increase the economic rents available from the fleets.

7. THE PROSPECT FOR JOINT FEE SYSTEMS

7.1 Introduction

While the FFA States have committed a substantial part of their immediate attention to aligning their individual national access arrangements, they have also recognized the institution of joint fee systems covering several zones as a longer term option.

7.2 The Joint Agreements with the American Tunaboat Association

With their particular interest to see regional arrangements, it has already proved possible to successfully operate a joint fee system for access for the vessels of the American Tunaboat Association.

By a joint access arrangement, these vessels were licensed to fish in the zones of the Micronesian States (Palau, the Federated States of Micronesia and Marshall Islands) through 1981 and 1982 under a system involving a single licence fee for access to those three zones. More recently, there have been negotiations towards renewing this agreement with an arrangement which would provide access for ATA boats to the zones of Palau, the Federated States of Micronesia and Kiribati. The new agreement would also provide scope for the accession of other States to the agreement. Drawing fairly heavily on the experience of the States involved in the negotiation, implementation and administration of the Micronesia/ATA Agreement, a Working Group in the region recently reviewed the likely benefits to be gained from joint licensing systems and identified likely constraints to their implementation. The conclusions of that Group are broadly summarized below.

7.3 Potential Benefits from Joint Licensing Systems

Potential benefits from the introduction of joint licensing systems might include the following:

- **Economic gains** could be expected from moving to a regional licensing scheme, since bargaining positions would be strengthened, competition between States for foreign fishing

effort would be reduced, the likelihood of fee evasion would be lessened, and the greater flexibility of movement provided to fishermen should allow higher catch values. The distribution of gains would depend on the formula used to distribute fee receipts.

- **Improved compliance control** would be expected since the coverage of the wider zone could be more comprehensive.
- **Reduced administration costs** were expected from reducing requirements for individual nation licences to a single regional licence and having a more effective, centralized, administrative office.
- **The development of new or under-utilized fishing grounds** was possible if the ability to fish more freely increased the attractiveness of the zones to distant water fishing interests.
- **Incentives to false reporting** were reduced under a system in which a fisherman paid a single fee to fish over a wide area, since there was no direct economic benefit to fishermen from misreporting areas of catch.
- **Increased control over the fisheries within the area** was a strong benefit of a more regional approach - vessels could be more comprehensively monitored and information could probably be more easily obtained on activity in high seas areas.

7.4 Constraints to the Development of Joint Licensing Systems

There are several identifiable constraints to the development of joint licensing systems which need to be overcome for such a scheme to be introduced:

- Firstly, a **joint fee level and structure** needs to be agreed. There is still a difference in practice and opinion on the relative merit of different types of fee system among FFA States, although States are moving closer together on their approaches to fee levels and structures. Complexities in fee structures can arise if particular States wish to, say, limit the number of vessels of a particular gear type operating in their zones.

- **Agreement on a revenue sharing system** would be a problem, especially if there were a chance that some countries might get less revenue from a regional agreement or that some countries might receive no revenue. A range of options on revenue sharing formulae exists, varying principally on the extent to which revenue is allocated by current catch data or by some other basis (such as size of zone) designed to provide some compensation to States which had contributed access to their zone to the scheme, but had not attracted foreign fishing in that period. The initial Micronesia/ATA Agreement provided for fees to be distributed wholly according to catch, but any new agreement is likely to have a minor proportion of fees distributed equally among licensing States, with the balance distributed according to catch.

- **The administration of agreements** is a potential constraint which could effectively be overcome, using existing regional agencies. However, the administration difficulties should not be under-estimated, a point confirmed by experience with the Micronesia/ATA Agreement.

- **Information gaps** are likely to be a constraint on decision-making. States would want to have better knowledge of the likely outcome of a regional agreement than was currently available before committing themselves. Three major areas of uncertainty were: (i) the extent of jointness of their fisheries; (ii) trends in fishing patterns and catch rates across the region, which would effect expected returns; and (iii) the negotiating data base, including data on markets and the economic structure of the distant water fishing activities, which was required to ensure effective negotiating at a regional level.

- **The region identified** for coverage by a single regional scheme was more likely to depend on States' collective and individual perceptions of who could benefit from participation, rather than on biological aspects of the fishery.

- **Existing legislative requirements** in the various participating countries might not be consistent with a more regional approach. Legislative changes can be made, but they take time, and are dependent on prior political commitment.

- Governments might perceive any joint approach to involve unacceptable limitations on their **sovereign rights** to control and develop their own resources.

- There could be some **loss of benefits from bilateral relationships** if there were, for instance, a special advantageous relationship between a coastal State and a distant water fleet or State. Regional licensing could dilute any such coastal State-distant water fleet relationship and reduce the benefits which could be derived under a national scheme.

- Participation in a regional scheme would cause difficulties for States which had not been able to agree on **the delimitation** of boundaries of fisheries zones, especially where there was disagreement over boundaries between adjoining States within the proposed licensing region.

- There are invariably **delays in the distribution of fees** as it is necessary to wait for catch reports to come to hand before fees can be distributed.

ANNEX 9

SOME THOUGHTS ON THE EFFECT OF TRADING BARRIERS ON THE DEVELOPMENT OF FISHERIES IN SOME COASTAL STATES

by

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Many factors will influence the ability of coastal States to discharge the responsibilities placed on them under the Law of the Sea Agreement to determine total allowable catch levels, to assess their own capacity to harvest the resources of their Exclusive Economic Zones, and to promote optimum utilization of those resources.

Nations which wish to extract the maximum economic benefits from their fishing resources face many difficulties. Disparity between the size of a country's population and the size of its fishing resources may indicate whether it will be seeking access to the fishing zones of other nations, or be under pressure from foreign nations to grant access to its own resources. Where a coastal State's fish resources represent a high proportion of that country's total resources, the need to extract the maximum economic benefits is of major importance.

Those nations with large populations, and with limited production of other animal protein, whose fishing resources (though possibly considerable), are inadequate to meet their own requirements, have probably long-since become distant water fishing nations. Other nations which may have larger potential fish resources than their domestic consumers can use, may have already seen those resources exploited by other nations.

In the changing circumstances created by the general acceptance of the Law of the Sea Agreement, consideration must be given to the infinite variety of conditions governing the ability of coastal States to extract the maximum economic benefits from their living marine resources. Consequently, there are many matters to be considered when terms and conditions for foreign access to so-called surpluses are being considered and guidelines are being evolved.

One of the most important aspects which needs consideration is the extent to which a coastal State's ability to achieve "optimum utilization" and to extract "maximum economic benefits" is influenced by that coastal State's ability to find profitable markets for its potential fish harvest.

While there may be many schemes to help coastal States to develop their fish catching and processing capacity, these alone cannot enable the coastal States to get the economic benefits which the quantity and quality of their resources could possibly provide. The economic benefits are related to the acceptability in international markets and access to those markets for the particular species of fish and fish products produced by the coastal State.

The most popular higher valued species are frequently those which are in relatively short supply worldwide. These may be universally traded species like lobsters and prawns where access to markets is usually assured. These and other highly valued species may be in the luxury class of fish products where the markets are mainly in the highly developed countries with sophisticated food preferences and the ability to pay for them.

The great majority of fish species, however, may be much harder to sell and therefore must be marketed well because there is a wide range of localized and national preferences or dislikes for different species and for different forms of preparation and presentation. International marketing of the less well-known and less preferred species is therefore especially difficult even without trade barriers. The ability to sell all types of fish at prices above the costs of catching, processing and marketing has a major influence on whether optimum utilization of the resources can be achieved.

Thus, any barriers to international trading of fish can become restrictions on fishing development. Protectionist policies of some nations which need more fish than they can produce from their own waters become serious barriers to trading and consequently to development.

In many cases the additional quantities required by the distant water fishing nations have, in the past, been caught in the waters of other coastal States rather than bought from those countries.

Some distant water nations which are expecting licences to fish for so-called surplus resources maintain a number of barriers against the importation of the very same fish produced by the coastal State which is expected to grant access to its fishing resources.

These barriers can take many forms and may be supported by Government policy or be created by protective, competitive policies and practices adopted by the fishing industries of distant water fishing nations.

Governments which assume the responsibilities for negotiating terms of access to the fishing zones of coastal States also have the responsibility for such barriers as import restrictions, import quotas, tariffs and a variety of non-tarrif barriers. The last can include critical hygiene, labelling, packaging and fish nomenclature requirements. Government monetary policies may affect exchange rates, subsidies for distant water fishing and for export marketing.

Fishing industry organizations in distant water fishing nations may create effective barriers to trade by adopting pricing or trading practices designed to restrict or discourage imports from coastal States anxious to develop their fishing industries.

Other barriers to the development of fishing for certain resources may be lack of cooperation or unwillingness in providing suitable vessels for joint ventures and leasing or chartering arrangements which would enable new fisheries to be developed. Some "aid" schemes may extract more benefits for the "donor" countries than are provided to the developing coastal State.

In not all cases do foreign fishing nations want access to fishing resources purely to feed their own populations. Many nations have actually been trading internationally in fish caught in foreign waters under licence in competition with the same fish produced by the coastal State which has granted the licences to fish in its waters.

The ability of coastal States to market the fish of their zone can thus be impaired by the marketing activities of licensed foreign countries selling at export in direct competition with the exports of the same species caught by the coastal State. In some cases where distant water fishing nations have had such species processed in a cheap labour country, they may have a price advantage as well as a possible delivery and freight advantage over the produce from the coastal State.

There is a practice of applying differential tariffs on particular fish species for which distant water fishing nations already have licences or want licences. Imports of some fish species, in addition to being subject to import quotas, can also be penalised by differential tariffs. For example, in one instance 10% duty is being charged on imports of the fish caught by the domestic fleet of the host nation, 5% on fish caught by joint ventures with the host nation, but all fish caught under licence enters duty free.

Devices to restrict what may appear to be competition from coastal States which wish to develop their fisheries, can lead to the selective application of certain restrictions on grounds of quality, health or nomenclature. The application of higher standards for mercury certification that apply to the domestic market, and for acceptable names for various fish species, are also examples of barriers which restrict trade.

In many cases developing coastal States do not have the marketing structure or the expertise to overcome those barriers erected by fishing industry competitive practices such as market manipulation, price variation, and other competitive marketing reactions.

Undoubtedly the Governments of distant water fishing nations come under considerable pressure from fishing organizations in those countries. However, Governments have not always responded to the request from fishing industry organizations representing holders of licences, to ban the importation of the very fish for which licences are held. There are cases where the markets for potential fish products are dominated by a small number of very large commercial enterprises. These can control volume and price nationally, have Government support through import restrictions and tariffs, while attempting to control supply internationally. There are special problems of marketing for coastal States when the main markets for certain fish species are in countries which already control a large proportion of the production of these species.

Restrictions applied to international trade in fish not only affect developing fishing nations but also many fishing nations which have reasonably well developed fisheries. In order to achieve optimum utilization of their resources these countries may wish to develop special resources, the markets for which are in foreign countries. Surplus resources are not those available in excess of what a coastal State may consume. Coastal States must be able to gain economic benefits by trading in any of their resources which are available after their own domestic requirements are met.

The fact that economic hardship is likely to be felt by those nations which have invested in deep water fleets and employed many people for distant water fishing activities is a serious problem and should be understood. On the other hand, there also need to be understanding of the difficulties which some developing fishing nations experience. Their economic hardships through lack of valuable resources and lack of development, may be proportionately greater than the hardships suffered by those nations which need to adjust their fishing activities so that other nations can fully utilize their own national resources.

Just as there is a need to develop cooperation in the management and control of common interest fisheries, there needs to be cooperation and goodwill in regard to the marketing of fish products from those common interest fisheries.

There appear to be no reciprocal obligations on distant water fishing nations to grant access to markets for fish to those coastal States to whose waters distant water fishing nations may be demanding access. It may possibly be argued that restrictions on trade and tariffs imposed on imported products are governed by other international arrangements such as GATT, or that Governments can not interfere with commercial trading practices or market conditions. Nevertheless, as a coastal State's ability to get the maximum benefits from the living resources of its Exclusive Economic Zone is seriously affected by its ability to sell the produce from those resources, then market access must surely be linked with access to the resources themselves.

It seems inevitable that in future negotiations for access to fishing resources, the right of access to markets will become an important issue.

ANNEX 10

IMPLEMENTATION OF AGREEMENTS WITH FOREIGNERS

by

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Introduction

The topic assigned to me is "The Implementation of Agreements with Foreigners". I cannot discuss the implementation of various agreements concluded among other Southeast Asian countries as I am ill-equipped for the subject. I will instead confine my observations to the implementation of fisheries agreements entered into by Indonesia with other countries in waters within its national jurisdiction. The opinions expressed in this paper, however, are totally personal, and do not necessarily reflect the opinions of the Indonesian Government.

Before one can discuss the various agreements concluded between Indonesia and other countries, one first has to understand Indonesia's varied national positions on the matter, as they will determine or affect the agreement itself. Secondly, for the purposes of the present discussion, the term "agreement" shall include not only agreements officially concluded, but also other arrangements that have existed for some time between Indonesia and other countries.

Indonesian Positions

From the point of view of Indonesia, all fisheries resources within Indonesian archipelagic waters and territorial seas fall within its national jurisdiction. These resources include those of sedentary species found in the Indonesian continental shelf or those of pelagic or demersal species found in the area which would become Indonesia's exclusive economic zone. This position is well known to everyone. Therefore, I merely have to refer to the Indonesian Declaration of 13 December 1957, announcing the Indonesian archipelagic state concept and the 12-mile territorial sea, both later enacted into Law No. 4/1960. In 1961 Indonesia also ratified the Geneva Continental Shelf Convention of 1958, thus acquiring sovereign rights over the sedentary species of all living resources within its continental shelf.

The essence of the archipelagic state concept is the recognition of the right of an archipelagic State like Indonesia to draw straight archipelagic baselines connecting the outermost points of the outermost islands of the archipelago, thus enclosing the whole archipelago into a single entity. The territorial sea, the contiguous zone, the exclusive economic zone, and the continental shelf of the archipelagic State shall be measured outward from these baselines. The waters within these baselines are archipelagic waters, over which the archipelagic State excercises territorial sovereignty. This sovereignty covers the waters, the airspace above the waters, the seabed and subsoil, and all other resources contained therein. 1/ Derived from this basic concept, especially from the concept of sovereignty over all the natural resources contained in the archipelagic waters, the archipelagic State

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1/ Through the years the Indonesian archipelagic State concept has found its way into the ICNT. For detailed regime of the archipelagic State concept which I hope will be incorporated in the next LOS Convention, see Articles 46-54 of the ICNT

exercises sovereignty over all the fisheries resources within its archipelagic waters. Thus, any exploration or exploitation of these resources, in accordance with Article 33 of Indonesia's 1945 Constitution, can only be undertaken for the benefit of the Indonesian people, either by their own organizations or through some kind of arrangements with foreign organizations. Any agreement concluded with foreign countries on this matter will have to take into account this basic position.

Since the whole archipelagic waters now belong to the archipelagic State of Indonesia, all national legislation with respect to fisheries in its waters can now be applicable to the Indonesian archipelagic waters and territorial seas. This legislation is either of recent origin or dates back to the colonial era. Some of the old legislation now applicable to the archipelagic waters of Indonesia is worth mentioning.

First, there is the Pearl and Coral Collecting Act of 1916 2/ which regulates pearl, anemone, and coral collecting within 3 miles from the coasts. Exclusive and traditional rights for such activities are guaranteed local fishermen anywhere in the sea where depth is less than 9 m at low tide. Such rights cannot be transferred to others except as provided for in the Act.

Second, there is the Fisheries Act of 1920 3/ which prohibits the use of poison, toxins, and explosives in fishing, except for authorized scientific purposes.

Third, there is the Coastal Fisheries Act of 1927 4/. The rules enunciated in this Act relate to fishing in the Indonesian territorial seas, then fixed at 3 miles from low tide along the coasts. The Act stipulates that only vessels flying the Indonesian flag and manned by a crew of Indonesian nationals (unless granted special permission by the Minister of Agriculture) shall be allowed to fish in the Indonesian waters. All fishing activities in the Indonesian waters shall respect and take into account the traditional fishing rights of the indigenous coastal population as well as the specific rights of local governments to regulate fishing along the coastlines under their respective jurisdiction. This Act has been amended several times, the latest having been in 1960 when both the Indonesian archipelagic State principles and the 12-mile territorial sea were enacted into Law No. 4.

Fourth, the Whaling Act of 1927 5/ regulates whaling within 3 miles of Indonesian coasts. The Act states that whaling within 3 miles of the coasts (now within Indonesian archipelagic waters and the 12-mile territorial sea) is allowed only under special permission from the President of the Republic, except whaling activities traditionally conducted by the indigenous coastal population. The Act further regulates all other details related to whaling.

Fifth, the Territorial Sea and Maritime Circle Act of 1939 6/ regulates Indonesian territorial sea (3 miles from the coasts at low tide or from straight baselines where there are bays, river mouths or estuaries less than 6 miles wide; or where there are island fringes along the coasts, or where there is a strait less than 6 miles wide and both of its coasts belong to Indonesia). The Act also establishes Indonesian maritime circles along specific areas within Indonesian coastlines. Fishing activities are prohibited within the maritime circles, except by the Indonesian indigenous population or by those with special permission from the Naval Chief of Staff. The Act also establishes strict guidance for the Naval Chief of Staff in granting the permission to fish within the maritime circles. Presidential Decree No. 103, issued 27 May 1963, provides for the conversion of all Indonesian waters into a single maritime circle. This Decree strengthens the power of the Naval Chief of Staff to enforce all fisheries legislation in all Indonesian waters.

Violators of all or any of the Acts cited above are either fined or jailed.

2/ State Gazette 1916, No.157, dated 29 January 1976

3/ State Gazette 1920, No. 396, dated 26 May 1920

4/ State Gazette 1927, No. 144

5/ State Gazette 1927, No. 145, dated 29 April 1927

6/ State Gazette 1939, No. 442

Some of the recent regulations on fishing in the Indonesian archipelagic waters and territorial seas contain provisions on the use of equipment and the use of trawlers in specified areas as well as provisions on the maximum use of fishery resources.

Decision Nos. 561/1973 and 40/1974, both by the Minister of Agriculture 7/ also obligate all enterprises engaged in shrimp fishing to make use of all the by-catch. In 1975 the same Minister issued a decision 8/ setting up guidelines on the proper conservation and management of the fishery resources. This decision regulates seasonal or areal closure of certain fishing grounds to one, some, or all fish species, as well as the kind, size, and number of vessels; the size of nets and all other fishing equipment; and the quota for each catch. Decision No. 02/1975 9/ prohibits trawling in waters less than 10 m deep around the coasts of Irian Jaya (see Chart in the Annex). Shrimp catching through the use of pair trawl, as well as cod ends having a mesh size of less than 3.0 cm (stretched mesh) is also prohibited. The Director General of Fisheries is authorized to determine every year beginning 1 April the number of vessels allowed to operate after the stock of fish or shrimp in the area has been assessed. Decision No. 123/1975 10/ prohibits the fishing of Rastrelliger, Decapterus, Caranx, Sardinella, and other similar pelagic species by purse seines less than 2 in on the wing side and less than 1 in in the bag. Violation of this rule can mean a revocation of the fishing permit.

One of the more important decisions made by the Minister of Agriculture is Decision No. 607/1976 11/. It provides for the division of parts of Indonesian coastlines into four belts (Fig. 1) namely:

1. First Fishing Belt, namely, coastal waters up to 3 miles from the low-water mark along the coasts. Here, inboard motorized fishing vessels above 5 gt or above 10 HP, all kinds of trawls (beam trawl, otter trawl, and pair (bull) trawl), purse seines and the like, encircling gill nets and drift gill nets, or nets more than 120 m long are prohibited.

2. Second Fishing Belt, namely, waters 4 miles wide measured from the First Fishing Belt. In this belt, inboard motorized fishing vessels above 25 gt or above 50 HP, bottom trawls (with otterboard) with head rope length over 12 m, mid-water trawls or pelagic trawls as well as pair (bull) trawls, or nets over 300 m long are prohibited. Fishing vessels owned by State Fishing Enterprise are exempted from the prohibitions stipulated for the Second Fishing Belt. 12/

3. Third Fishing Belt, namely, waters 5 miles wide measured from the Second Fishing Belt. Inboard motorized fishing vessels above 100 gt or above 200 HP, mid-water trawls (otterboard) more than 20 m head rope, length, pair (bull) trawls as well as nets over 600 m long are prohibited in this belt.

4. Fourth Fishing Belt, namely, waters outside the Third Fishing Belt. Here, all vessels and legitimate equipment may be used except pair (bull) trawls which may only be used in the Indian Ocean.

The regulation also stipulates that, except for some specified exceptions, all nets having mesh sizes of less than 25 mm and purse seines for tuna having mesh sizes of less than 60 mm are prohibited in all the four belts. In addition, the use of beam trawls, otter trawls, and pair (bull) trawls for pelagic and demersal fishing is prohibited in both the Strait of Madura and the Strait of Bali.

7/ See Decision Nos. 561/KPTS/UM/11/1973, dated 7 November 1973 and 40/KPTS/UM/2/1974, dated 1 February 1974

8/ See Decision No. 01/KPTS/UM/1/1975, dated 2 January 1975

9/ See Decision No. 02/KPTS/UM/1/1975, dated 2 January 1975

10/ See Decision No. 123/KPTS/UM/3/1975, dated 31 March 1975

11/ See Decision No. 607/KPTS/UM/9/1976, dated 30 September 1976

12/ See Decision No. 608/KPTS/UM/9/1976, dated 30 September 1976

Fig. 1. The four fishing belts of the Indonesian coastlines.

All fishing permits must specify the belt where the vessel is allowed to fish. Violations of this regulation may result in the revocation of the fishing permit. The Director General of Fisheries is authorized to strictly enforce this decision.

To further regulate the use of trawls, the Minister of Agriculture issued Decision No. 609/1976 13/. This divides demersal fishing within Indonesian waters into four zones (see Chart in the Annex). Each trawler can operate only in the zone assigned to it and it must bear a sign with a colour indicating its zone of operation. The four zones are: Zone A in the Indian Ocean; Zone B in the Strait of Malacca and South China Sea; Zone C in the Strait of Karimata, Java Sea, and the Strait of Makassar; and Zone D in the Eastern Part of Indonesia.

The Director General of Fisheries 14/ announced that the decisions of the Minister of Agriculture (Decision Nos. 607, 608 and 609 1976) entered into force on 1 July 1978. Since then, 634 trawlers have been arrested in all parts of Indonesia for violating the rules. This represents about 3% of all fishing vessels (about 21,000 vessels) operating in Indonesian waters.

All of the above-mentioned rules and regulations are necessary to conserve all living resources and to protect them from being depleted especially those that are important for the consumption and the economy of small local fishermen as well as other resources that are important primarily for the world market. Fisheries along the Strait of Malacca, the Java Sea, the Strait of Bali, and the Strait of Makassar can be classified as within the meaning of the first category, while tuna fishing in the Banda Sea and shrimp exploitation in the Arafura Sea can be classified as within the second category. This fact is particularly important since the livelihood of an important sector of the Indonesian coastal population, numbering over one million fishermen, largely depends on fisheries of the first category. The second category is equally important because of its potential to provide sources for foreign exchange which can be beneficial to the conomic development of the country.

It is then clear that all foreign vessels operating under whatever arrangements in Indonesian waters must strictly observe the above-mentioned rules and regulations.

Agreements with Foreign Countries

When one discusses agreements concluded by Indonesia with other foreign countries, various situations arise:

1. Arrangement concluded with Japan for the exploitation of tunas in the Banda Sea.

2. Agreement, in principle, with South Korea toward cooperative efforts in matters concerning fisheries.

3. Arrangement negotiated between Indonesia and its neighbours, specifically Singapore and Thailand, allowing adjacent neighbouring States of Indonesia to continue their traditional fishing rights within specified areas of the Indonesian archipelagic waters.

4. Agreement to be made with regard to the right of access by the landlocked and geographically disadvantaged States to the surplus living resources in areas that are to become part of Indonesia's exclusive economic zone.

5. Arrangement made with other neighbouring States, particularly Australia, allowing Indonesian traditional fishermen to continue fishing in areas within the Australian exclusive fishing zone, namely within 12 miles from the Australian baselines.

13/ See Decision No. 609/KPTS/UM/9/1976, dated 30 September 1976

14/ See Decision No. H.11/1/4/4/78, dated 15 May 1978

Arrangement with Japan

The Japanese Government claimed that their fishermen had traditionally fished in far-distant waters of Indonesia, including the Banda Sea area. This claim certainly ran counter to the Indonesian assertion of archipelagic principles since 1957. The determination of Indonesia to enforce its archipelagic principles has brought about problems affecting its relations with Japanese fishing interests, especially in the Banda Sea area.

Protests made by Japan in 1957 and in 1960 failed to placate Indonesia to relinquish its archipelagic principles. Indonesia continued to enforce these principles vis-a-vis the Japanese boats fishing illegally in the area. Various fishing vessels were either arrested, brought to court, or fined or sentenced for violating Indonesian laws.

Various efforts by the two countries to resolve the matter finally succeeded when both parties signed the "Interim Arrangement" in July 27, 1968. This interim arrangement, concluded between the Government of the Republic of Indonesia and the Representatives of the National Federation of Fisheries Cooperatives of Japan and the Federation of Japanese Tuna Fishermen Cooperative Associations, regulated tuna fishing by Japanese fishermen who are members of the two associations "in the waters between the Indonesian islands". The area covered by the arrangement was the Banda Sea which is within the archipelagic waters of Indonesia, with coordinates 124°E 2°S, 129°E 2°S, 132°E 3°S, 132°E 8°S, 124°E 8°S, and 124°E 2°S, all specified in the Interim Agreement. The Japanese undertook not to operate in areas other than that specified in the Arrangement.

Article 1 of the Arrangement granted certain Japanese vessels permission to call at the port of Ambon where they would be provided facilities for tuna fishing in the area. Before being able to fish in the Banda Sea area, however, the fishing vessels were to be issued certificates from the Indonesia Embassy in Tokyo. The call at che Indonesian port was to be made at the end of each fishing activity for purposes of verification by the local naval authority. Applications for permission and facilities had to be secured by the Associations on behalf of their members, specifying therein the names of the vessels, the names of the owners, and the vessel's registration number as well as its tonnage. Additional requirements such as a crew list and a photograph of the vessel were also imposed.

Japanese fishing vessels granted permission and certificate were also required to bear specific markings on both sides of the vessel's bridge, the details of which were specified in the Arrangement.

To be able to fish in the specific area, fishing vessels had to pay a certain fee, depending on the class of the vessel used. For a class A vessel, namely, a vessel of 40-t class of less than 70 gt, the fee was fixed at US$300 per vessel per year, while for a class B vessel, namely, a vessel of 100-t class of not less than 70 gt, but not larger than 300 gt, the fee was fixed at US$390 per vessel per year, payable in yen through the Indonesian Embassy in Tokyo.

To protect local Indonesian fishermen, Japanese fishing vessels were not allowed to operate within the limit of 30 miles from the island of Ambon, and from other areas to be mutually agreed upon. Likewise, Japanese fishing vessels were not allowed the use of mother ships or transporting vessels. Each vessel was to be on its own, and fishing was limited to the longline method.

The number of vessels allowed to operate under this Arrangement was limited to a maximum of 250, not more than one-third of which should consist of 100-t class vessels of not less than 70 gt but not larger than 300 t. Within this category, however, 13 vessels of approximately 200 gt but not exceeding 300 t were allowed. The rest would be vessels of 40-t class not larger than 70 gt. The maximum catch of the whole Japanese operation under this Arrangement was limited to not more than 15,000 t/yr. The arrangement took effect on its signing on 6 July 1968 and was to be in force for only 1 year.

The form and the contents of this Arrangement were peculiar. First, it was negotiated between the representatives of the Indonesian and the Japanese Governments but it was signed between the Government of Indonesia and the National Federation of Fisheries Cooperatives of Japan and the Federation of Japanese Tuna Fishermen Cooperative Association, both private organizations. It seemed that, while the Japanese Government was eager to protect the interests of its fishermen, it

was nevertheless reluctant to conclude an official agreement with the Government of Indonesia. Perhaps Japan feared that such a bilateral agreement might be interpreted from the legal point of view as its indirect but de facto or de jure recognition of the Indonesian archipelagic concept.

Secondly, the arrangement regulated Japanese fishing activities "in the waters between Indonesian islands". From the very start, the Indonesian Government disagreed on this formulation and preferred the phrase to simply read "in the Indonesian waters". The implication was clear: the Indonesian Government wanted clear, legal Japanese recognition of its archipelagic concept, while the Japanese side insisted on maintaining some semblance of legal non-recognition through the formulation.

Thirdly, the Japanese side was willing to pay for access to the tuna fisheries in the Banda Sea. Although Indonesia considered the amount paid as very little or meaningless, it nevertheless viewed the payment as an act which constituted Japan's recognition of its archipelagic concept. The Japanese side, of course, simply viewed the payment as a fee to enter an Indonesian port since the Japanese fishing vessels operating in the Indonesian archipelagic waters had to report the results of their operations to the predetermined Indonesian port.

Fourthly, the arrangement was valid only for a limited time - 1 year. Thus, it had to be renewed every time; and each time, the discussions would centre on the need for such an arrangement and on the points previously mentioned. Basically, Indonesia did not consider the arrangement beneficial to her and therefore wanted to modify the terms to better suit her needs. Yet, the Japanese side considered the arrangement extremely important primarily because it involved activities and the economic life of a certain sector of Japanese electorates; thus, it was politically significant for any Japanese Government in power. Each time the negotiation bogged down, political pressure would be applied on Indonesia. As a result the arrangement was renewed five times and replaced by a new arrangement in 1975. Between 1968 and 1975 the arrangement generated less than US$10 million for the Indonesian Government, namely, US$147,640 in licence fees, US$1,929,186 in the form of aids (grant), and US$7,856,285 in the form of credit for project aids.

By 1975 the Indonesian Government had become very reluctant to continue with the arrangement. However, it had to continue giving special considerations to this peculiar Japanese interest because the Japanese Government considered the solution of the issue essential for their position on the matter of archipelagic States in the Law of the Sea Conference. Before Prime Minister Tanaka could agree to express sympathetic views vis-a-vis the archipelagic principles when he visited Indonesia in 1974, the Indonesian approval to continue the arrangement in the archipelagic waters had to be secured first.

By 26 September 1975 the validity of the Interim Arrangement had expired. Again, new negotiations were made. Both sides decided against a sixth renewal of the Interim Arrangement. Instead, a new arrangement was made, this time between an Indonesian State Fishing Enterprise, the Perikanan Samodra Besar (PSB) 15/ and the same Japanese Fishing Associations mentioned earlier. The new arrangement embodied provisions for tuna fishing cooperation on the basis of a profit sharing arrangement. The new arrangement also required the Associations to prepare and transmit to the PSB a sailing plan for tuna fishing for each contract year. The plan is to be carried out after due acknowledgement from the PSB "which will be given expeditiously" (Article II of the Contract). The area of operations under the new arrangement remained the same, e.g., "the waters between the Indonesian archipelagic islands", as provided for in the Interim Arrangement. In the Interim Arrangement, Japanese fishing vessels were not allowed to operate within the limits of 30 miles from the island of Ambon, but unlike the Interim Arrangement, the Japanese vessels were not allowed to operate within 15 miles from other specified groups of islands, such as the Geser, Gorong, and Banda Neira groups. The restriction that Japanese vessels should engage mainly in tuna fishing and only by longline method remained. The maximum catch was now reduced to 8,000 t/yr and the number of longline vessels to be used was fixed at a maximum of 100, consisting of vessels less than 80-gt class (class A) and 80 gt or more but less than 300-gt class (class B) vessels. The maximum number of class B vessels was limited to 33. Likewise, Japanese vessels operating under the Contract were required to bear markings, the details of which were indicated in the Contract. The vessels were not also allowed the use of mother ships or transporting vessels.

15/ The PSB was established under the Government Regulation No.12, 1969, Government Regulation No.16, 1972, and the Articles of Association No.37 of 12 May 1972, and domiciled in Jakarta on the basis of the Minister of Agriculture's Decision No. 350/KPTS/UM/8/1975 of 20 August 1975

One new provision in the Contract was the profit sharing arrangement. Under the Contract the Associations were to relinquish to the PSB 40% of the profit accrued from their operations. The detailed formula for the calculation of the profit was to be decided by both the Associations and the PSB. The Associations were to bear all operating expenses incurred in the operations of the vessels as well as transmit to the PSB reports on the operations and their results, including a profit and loss statement. On the other hand, the PSB was to take administrative steps to obtain necessary documents to facilitate operations and assist the Associations in obtaining the necessary port entry permit. The Japanese vessels operating under the Contract were also required to carry certificates issued by the Indonesian Embassy in Tokyo.

The Contract was to take effect on 17 October 1975 and was to be valid for 3 years beginning from the date the Interim Arrangement expired.

Again, the implementation of the Contract during the last 3 years was not encouraging to Indonesia. The profit from the operations was calculated only at 2.5%. Since PSB's share of the profit was calculated at 40%, the PSB gained only 40% out of the 2.5%, namely, about 1% of the total gross proceeds. The amount received by the PSB was not even enough to cover administrative costs, such as telegrams, verifications, etc. Furthermore, the number of Japanese vessels reporting under the Contract was less than the maximum allowable number. While 100 vessels per year were allowed to operate under the Contract, only 23 reported for verification in 1975-1976, 35 in 1976-1977, while 77 applied between September 1977 and June 1978. Between September 1977 and April 1978, only 35 vessels reported for verification and checking at Ambon.

Various problems also arose under the Contract arrangement. The Indonesian Department of Finance claimed that, since the Japanese Fisheries Association and the Japanese crews operating under the Contract gained their incomes in Indonesia, they should be levied taxes under Indonesian Law. Naturally, the Associations and the crews refused to pay tax on the ground that they have already been taxed in Japan. The problem was solved only through a "dispensation" granted by the Indonesian Department of Finance, a situation which was hardly agreeable. Secondly, Japanese vessels were granted bunkering facilities upon entry at Ambon for verification. The irregular entry of these vessels created problems for the Pertamina State Oil and Gas Company, which had to make arrangements for the purpose from Jakarta.

During the 3-year period of the Contract, aside from the negligible 1% profit sharing, the Indonesian side also obtained one training vessel along with equipment valued at US$1.8 million as grants and another repair shop for the PSB valued at US$200,000.

Since the Contract is valid only for 3 years, ending 27 September 1978, both sides are once again faced with the ever-perplexing problem of renewing the Contract. It is not yet clear how the arrangement will be made, if at all, in the coming years.

Strict enforcement of the arrangement with Japan presented many problems. Firstly, the area covered by the arrangement was relatively large making it difficult for Indonesia's law enforcement agencies to supervise. Secondly, other vessels, including fishing vessels also used the area as a transit route between the Indian and the Pacific Oceans, thus making it difficult for law enforcement agencies to distinguish vessels covered by the arrangement from those that were merely passing through. Thirdly, the enforcement of the arrangement required an improvement in the efficiency of various enforcement agencies in terms of personnel, equipment, methods, as well as coordination. Fourthly, even if the enforcement activities at sea worked smoothly, the process of judicial solution through courts would still be monumental. A vessel apprehended at sea for violating the arrangement of Indonesian rules and regulations on fishing had to be brought to the court which could be 100 miles away from the site of apprehension. A few weeks or even months could pass before the case was finally settled. Financial damage to both the vessel and the Indonesian Government (which had to feed the crew during the waiting period) could be enormous.

To avoide this situation, since the early 1970s, the Indonesian Government issued the "peaceful fine system" under which a vessel alleged to have violated Indonesian fishing laws and regulations may be allowed to leave Indonesian waters immediately upon paying specified amounts as fines to the Indonesian Government through the law enforcement authority that apprehended it at sea. The idea

was to avoid lengthy and costly judicial procedures for the benefit of both the vessel and the Indonesian Government. Unfortunately, this attempt also met with many difficulties, and abuse of enforcement powers was discovered later on. As a result the system was abrogated.

On the other hand, vessels which fished illegally in Indonesian waters were also much to blame for the difficulties encountered in enforcing the arrangement. Some of these vessels would rather bribe the corrupt government officials rather than stand trial, which in any case would surely cost them more time and money.

Various licences have also been given by the Indonesian Government to various Japanese companies to fish through joint venture agreements with Indonesian private fishing companies. Dating back to earlier years, such licences were used in Arafura Sea for shrimp and others. This type of operation was a simple joint venture agreement within the context of Indonesian Foreign Investment Law. Like all joint venture investment agreements, they were all under Indonesian laws and therefore did not create the same problems.

Fisheries Arrangement with the Republic of Korea

South Korea is one of the countries in Asia which has been developing far-distant fishing capabilities. It is therefore logical for the Government of South Korea to consider possible fisheries cooperation with Indonesia, and vice versa. Officials of both countries first met in Seoul, in July 1972, to discuss the possibilities of establishing fisheries joint ventures in Indonesia. South Korea agreed to encourage participation of Korean companies in such joint ventures while Indonesia expressed its readiness to support such activities, including trial fishing. Both parties also agreed to promote fisheries technical cooperation through exchange of scientists and technical and scientific data, and in the field of education. South Korea further expressed its willingness to export fishing vessels on a credit basis, while Indonesia agreed to explore the possibility of importing fishing vessels from the Republic of South Korea.

A second meeting was held in Jakarta in September 1972. The Korean fishing company agreed that, as a first step toward the establishment of fisheries joint ventures in Indonesia under Indonesian law, it would "in the very near future" send three tuna vessels and two stern trawlers to "Indonesian waters" to perform trial operations in cooperation with Indonesian private companies for a period of 6 months. Both sides agreed on the immediate implementation of the trial operation. Also discussed in the meeting were the realization of technical cooperation arrangement between the two countries, the possibility of conducting a joint survey in Indonesia and its adjacent waters, and the possibility of importing fishing vessels from the Republic of Korea.

A third meeting took place in Seoul in May 1974. In this meeting it was agreed that the Republic of Korea would share its fishing experiences and techniques with Indonesia to develop the latter's coastal and distant water fisheries. Both countries also agreed to further strengthen existing technical cooperation; to cooperate in research and survey of marine resources in the waters in Indonesia; to encourage joint ventures between private enterprises of each country in the field of tuna longline, skipjack pole-and-line, and shrimp trawling; and to arrange through private sectors the exportation of fishing vessels from the Republic of Korea to Indonesia.

In practice, there has not been extensive fisheries cooperation between Indonesia and South Korea and there has not been any joint venture agreement concluded between private enterprises of each country. The question of enforcement of the Indonesian-South Korean cooperation was therefore not very prominent. The issues of South Korean vessels were primarily those of transitting Indonesian archipelagic waters and how to prevent them from fishing while in transit. The issue was not so much that of enforcing agreements with other countries but of implementing Indonesian laws and regulations vis-a-vis the transitting fishing vessels.

Arrangements with Neighbouring Countries

In 1969, possibly taking the hint from the Interim Arrangement between Indonesia and Japan, Malaysia took the initiative in concluding an agreement on fishing activities by Malaysian nationals in Indonesian waters in the Strait of Malacca. After some lengthy negotiations, however, the attempt

failed to have concrete results because Indonesia was reluctant to apply the interim arrangement system with regard to fishing activities in the Strait of Malacca. Indonesia was, however, prepared to cooperate with Malaysia on the basis of the Indonesian Foreign Investment Law of 1967 (Indonesian Law No.1, 1967) to the effect that Malaysian private companies would be encouraged to invest through joint ventures with Indonesian fisheries cooperatives or companies. This idea was not so attractive to Malaysia and therefore no agreement on fisheries has been concluded between the two countries.

Singapore was also an issue. Singapore claimed that for years its fishermen had traditionally fished in certain parts of Indonesian archipelagic waters. Moreover, for years, Singaporean vessels had been visiting and plying the waters between Indonesian islands to buy fish from Indonesian fishermen. The latter activities were more of commercial and trading activities rather than fishing activities.

At the same time, Indonesia was concentrating its efforts on maintaining, implementing, and gaining international recognition for its archipelagic state concept. These efforts created problems with Singapore fishing activities in Indonesian archipelagic waters. To gain Singapore's recognition of its archipelagic state concept, Indonesia undertook several consultations with the former and it seemed essential that Indonesia give some concessions to Singapore. One of the concessions given was the recognition of Singaporean traditional fishing rights in certain areas of the Indonesian archipelagic waters. As later incorporated in Article 51 of the ICNT, an archipelagic State must recognize traditional fishing rights of neighbouring States immediately adjacent to it in certain areas fishing within its archipelagic waters.

The recognition of traditional fishing rights, however, should be a qualified one. Firstly, the concept of traditional fishing rights should be clearly distinguished from the concept of traditional right to fish. While some may argue that under customary international law, all States may have traditional rights to fish in the high seas or in the waters which once were high seas, the concept of traditional fishing rights should be based on real and existing practices. So, the existence of sufficiently long practices of fishing in certain areas of the Indonesian archipelagic waters must first be established before traditional fishing rights can be recognized. Secondly, the concept of traditional fishing rights does not relieve foreign fishermen of the obligation to observe Indonesian laws and regulations and shall not detract the Indonesian Government from protecting its fisheries resources as well as the well-being of its indigenous coastal fishermen; in short, the concept of traditional fishing rights should not be in conflict with the efforts exerted by the Indonesian Government to develop its fishing industries for the well-being of its own fishermen.

The concept of traditional fishing rights, based on actual fishing, must therefore be clearly defined. As far as Indonesia is concerned, the word "traditional" should refer and respond to several criteria. Firstly, "traditional" should be judged in terms of time-frame, that is, the actual existence of sufficiently long fishing activities must be established. Secondly, "traditional" should also indicate the area frequently visited by the fishermen, that is, the fishing ground visited should be relatively constant. Thirdly, "traditional" should also refer to the fishermen themselves, in the sense that the right shall be granted only to the same fishermen who have visited the area traditionally. Fourthly, "traditional" should also refer to equipment and vessels used as well as the amount of catch, in the sense that to qualify under the meaning of "traditional fishing right", the vessels used should be relatively traditional ones. It therefore excludes the possibility of granting traditional fishing rights to modern vessels with modern equipment, primarily because such modern vessels and equipment would put Indonesian local fishermen in an extremely disadvantaged position.

The concept of traditional fishing rights is thus a complex one. Therefore, Article 51(1) of the ICNT stipulates that "the terms and conditions of the exercise of such rights and activities, including the nature, the extent and the areas to which they apply", shall have to be determined by bilateral agreement between the States concerned. The text also stipulates that the right conferred on the basis of traditional fishing rights shall not be transferred to or shared with third parties, either through joint ventures with other countries or through any other arrangements. It is therefore clear that, in the future, the enjoyment of traditional fishing rights by adjacent neighbouring States in Indonesian archipelagic waters is recognized although its implementation and modalities would depend on the bilateral agreement to be concluded between the countries concerned. Up to now, no such agreement has been concluded.

Needless to say, the recognition of traditional fishing rights of neighbouring States immediately adjacent to the Indonesian archipelagic waters equally applies to Malaysian fishermen. It definitely excludes fishermen from Japan, Korea, and other far-distant fishing nations.

Arrangement with Thailand

Thailand is one of the fast-growing countries, fast becoming a far-distant fishing nation. It also has one of the most developed fishing industries in Southeast Asia. Although Thai fishermen still fish largely within the Gulf of Siam and in the Andaman Sea, many Thai fishermen have traditionally visited Indonesian archipelagic waters within the last several years.

Due to its fast growing fishing industry, Thailand has also put up some conditions to support Indonesian archipelagic State principles. Fully aware that Thai fishing activities within Indonesian archipelagic waters may or may not be included within the concept of traditional fishing rights, Thailand, in supporting the Indonesian archipelagic State concept, is also asking for concessions in the form of special arrangements and cooperation on fishing in the Indonesian archipelagic waters. As in other cases, Indonesia is always prepared to enter into some kind of arrangement with Thailand on the basis of its Foreign Investment Law of 1967. The officials of the two countries have met twice to discuss the matter and they have agreed to conduct a joint survey to look for appropriate species that are economically and commercially exploitable. They survey was conducted in 1977. Both countries are now studying and analysing the result of the survey before attempting to conclude the necessary and appropriate fishing arrangement.

The Right of Landlocked and Geographically Disadvantaged States

Aside from Singapore and Laos, it would be difficult to name other Southeast Asian States that fall within the meaning of landlocked and "geographically disadvantaged States". At any rate, aside from Singapore, no other landlocked and geographically disadvantaged State has exercised fishing activities in the Indonesian archipelagic waters or territorial seas. Therefore, there is no need to discuss arrangements for this group.

The question may, however, arise should Indonesia proclaim its own exclusive economic zone, as many of its neighbours have. By then, in accordance with Articles 69 and 70 of the ICNT, some kind of arrangements will have to be made between Indonesia and the landlocked and geographically disadvantaged States adjacent to it to allow the latter to use the surplus fishing resources in the area falling within the former's exclusive economic zone. Since Indonesia has not yet declared its exclusive economic zone, the question is more hypothetical than real.

Indonesian Traditional Fishing Rights in Waters off Australia

For centuries, Indonesian fishermen from eastern and southern Indonesia have traditionally visited the waters off the coast of Australia for various kinds of traditional fisheries. Fishermen from Ambon and the South Molucas, for instance, have traditionally visited the Gulf of Carpentaria for pearl fisheries. The Australian Government has recognized these traditional fishing activities which have continued up to the present without much difficulty.

On the other northern coasts of Australia, Indonesian fishermen, primarily from the Lesser Sunda Islands, have also regularly visited the area around the Ashmore and Cartier Island groups for various kinds of fishing. Many of these island groups now part of Australia were once regarded as belonging to the ancient kingdom of Roti, an island chain in the Lesser Sunda Islands group. The fishing activities themselves were not much of a problem since the Government of Australia has always recognized the traditional fishing rights of Indonesian fishermen. The problem was more of an environment nature than of fisheries. The Indonesian fishermen, being traditional, used traditional vessels, equipment, and methods of fishing. They were generally unaware of modern environmental problems. They therefore had the habit of going ashore to look for fresh water and firewood. Sometimes they hunted birds which, in Australia, were sometimes seasonally protected. After various discussions between the Government of Australia and the Government of Indonesia, a Memorandum of Understanding was signed on 7 November 1974. The Memorandum granted Indonesian traditional fishermen permission to operate in the exclusive fishing zone and on the continental shelf adjacent to the Australian mainland

and offshore islands until 28 February 1975. As of March 1975, Australian laws and regulations would apply within its 12-mile exclusive fishing zone. "Traditional fishermen" means the fishermen who have traditionally taken fish and sedentary organisms in Australian waters by methods which have been traditionally used over decades of time. "Exclusive fishing zone" means the zone of waters extending 12 miles seaward from the baselines from which the Australian territorial sea is measured. The memorandum further stated that after 28 February 1975, Australia would continue to respect and allow operations by Indonesian nationals around Ashmore Reef, Cartier Islet, Scott Reef, Seringapatam Reef, and Browse Islet subject to the following conditions:

1. The operations shall be limited to traditional fishermen.
2. Landings by Indonesian traditional fishermen for the purpose of obtaining supplies of fresh water shall be confined to East Islet and Middle Islet of Ashmore Reef.
3. Traditional Indonesian fishing vessels seeking shelter may do so within the island groups mentioned above, but persons shall not go ashore except as mentioned in (2) above.

The memorandum stipulated further that Indonesian fishermen would not be permitted to take turtles in the Australian 12-mile exclusive fishing zone. Trochus, beche de mer, abalone, green snail, sponges, and all molluscs can be taken from seabeds adjacent to Ashmore and Cartier Islands, Browse Islet and Scott and Seringapatam Reefs.

Implementing the memorandum has not been easy. Up to this day, despite numerous circulars issued by either the Directorate General for Fisheries or the local governments fishermen have continued to violate the memorandum. It has not been easy also to ask the traditional fishermen to refrain from going onshore of an island where they have traditionally visited for ages. The problem was therefore more one of education rather than one of law enforcement. It is fortunate that, up to the present, the Australian Government has shown sufficient understanding of the complexities of an enforcement action.

Recently, Australia has also declared its intention to enforce a 200-mile economic zone around its territory. The 200-mile area, if claimed by Australia, although it has not been clearly delimited, would almost certainly affect the fishermen from neighbouring countries, especially fishermen from Indonesia who have been fishing in the area. This is something different from the traditional fishermen discussed above. Taking cognizance of this fact, Australia has also indicated its willingness to consider the matter and has offered the States concerned, including Indonesia, opportunities to discuss whatever fishing interests Indonesia has in the area which would be claimed as part of Australian exclusive economic zone. The matter is now under serious study by the States concerned.

Conclusion

At present the only important agreement on fisheries concluded by Indonesia is the interim arrangement of 1968 with Japanese Fishing and Tuna Associations to fish in the Banda Sea area. After several renewals, the interim arrangement was replaced in 1975 by a profit sharing arrangement between the Indonesian State Fisheries Enterprise and the Japanese Fishing and Tuna Associations. The terms of the interim as well as the profit sharing arrangements were not really profitable to Indonesia. It felt that the terms set forth in the interim arrangement and the profit sharing system needed revision. The arrangements concluded in the past have had many political overtones.

Enforcement of these arrangements has not been easy. Firstly, some of the fishing vessels themselves were reluctant to report to the Indonesian naval authority at Ambon after completing their fishing activities. Secondly, the area of fishing was too large for the limited number of Indonesian patrol facilities to effectively supervise, resulting in many violations committed unnoticed. Thirdly, the Indonesian law enforcement capabilities themselves were extremely limited either in number, equipment, or other facilities. The emphasis on economics in the Indonesian development programme within the last two Five-Year Development Plans has failed to strengthen or improve Indonesian surveillance capabilities for law enforcement at sea. Fourthly, while there was inadequacy in the capability and the efficiency of the law enforcement agencies at sea, the procedures involving judicial solution for any violators caught also required improvement, particularly in speed. Finally co-ordination among the various law enforcement agencies at sea was poor. It is a well-known fact that

in Indonesia the navy, police, immigration, customs, and communications offices has its own enforcement jurisdiction and officers at sea. Although in theory these agencies are under the operational command or regional Defense Commanders, in practice it has not been easy for them to coordinate their activities at sea.

The other arrangement that Indonesia will make with regard to fishing activities in its archipelagic waters concerns the implementation of the traditional fishing rights of the immediately adjacent neighbouring States in certain areas of the archipelagic waters. The details of these arrangements must be negotiated and determined further through bilateral agreements.

Indonesia also has problems concerning its traditional fishing rights in waters off the coast of some of its neighbours. Some of these rights, such as the right to fish off the coasts of Australia, have been regulated through bilateral arrangements. However, more time is needed to effectively implement and enforce such arrangements, especially since traditional fishermen concerned have to be fully educated to get used to the new arrangement.

For various reasons, Indonesia has not yet declared its own exclusive economic zone, although it will certainly do so within the shortest possible time. If and when Indonesia decides to enforce its own exclusive economic zone, it would almost certainly conclude bilateral agreements with the relevant landlocked and "geographically disadvantaged States" in the sub-region of Southeast Asia to enable fishermen from those countries to participate in the exploitation of the surplus living resources within the exclusive economic zone. Similarly, if and when Indonesia declares and enforces its own exclusive economic zone, it would also certainly undertake negotiations with the relevant neighbouring countries to delimit the exclusive economic zone of these countries.

ANNEX 11

FOREIGN ACCESS TO EEZs AND THE DERIVATION OF COASTAL STATE BENEFITS: METHODS AND TECHNIQUES

by

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1. INTRODUCTION

This paper, in keeping with the author's instructions, attempts to describe and to assess the various techniques that coastal States may employ in deriving direct benefits from distant water nations. The task of assessing the techniques appears at first glance to be simple enough, but the apparent simplicity of the task vanishes when it is realized that the choice of technique cannot properly be divorced from the overall problem of management of living resources within the coastal States' EEZs.

Thus, before examining the individual techniques in detail, it is desirable to consider, in general terms at least, the link between resource management and coastal State extraction of benefits from distant water nations.

2. SOME GENERAL OBSERVATIONS

Under Articles 56 and 62 of the Law of the Sea Convention, the coastal States are given virtual property or ownership rights to the living resources within their EEZs. It is true, of course, that Article 62 contains the so-called "Surplus Principle" under which coastal States are to give distant water nations access to surplus portions of the TACs. However, given the breadth of terms and conditions the coastal State may impose upon those countries seeking access to the surpluses, it is difficult to escape the conclusion that the surplus principle does little to undermine the coastal State's aforementioned ownership rights.

If the fishery resources within a given EEZ constitute coastal State property, then one can in the first instance think of the object of resource management as being the maximization of coastal State net benefits from the resources. As a convenience, or short hand, it is common to refer to these net benefits as "resource rents".

The resource rents can be viewed as the difference between the gross revenues derived from the fishery minus all harvesting, processing and resource management costs. It should be noted in passing that, if desired, one can broaden the definition of resource rents to include non-monetary benefits (and costs).

Fisheries constitute renewable resources and hence can be harvested on a sustained yield basis. This implies, in turn, that the resource rents from the fisheries are also sustainable. Hence the object of fisheries management must be more carefully stated as the maximization of resource rents over time. If the object is to maximize resource rents over time, then it becomes obvious that any management measure or policy must be judged in terms of its short and long run effects. A particular measure may enhance rents from the fishery in the short run, but only at the cost of undermining future prospects for obtaining resource rents.

Now consider the role of distant water nations in the coastal State zone. If distant water nations are permitted to share in the exploitation of coastal State fisheries, then it must be expected that they will also share in the resource rents associated with those fisheries. The size of the distant water nations' share of the resource rents will presumably depend upon their bargaining power vis à vis the coastal State.

It must thus appear that granting distant water nations access to coastal State EEZs runs directly counter to the goal of maximizing coastal State rents from the relevant fisheries. Indeed one might be tempted to refer to the rents accruing to distant water nations as a consequence of being granted access to the EEZs as a "Surplus Principle" or Article 62 tax imposed upon the coastal States.

If the appearances were correct, then the purpose of various techniques to extract direct benefits from distant water nations would be straightforward. It would be to mitigate, if not reduce to zero, the effects of the aforementioned tax. The various techniques could then be assessed on this basis.

It is certainly true that many coastal States, at the commencement of E.F.J. at least, acted as if acceding to the "Surplus Principle" meant submitting to a tax. Nonetheless, it can be argued that there is no necessary reason why granting distant water nations access to a given EEZ must run counter to the goal of maximizing coastal State rents from fisheries within the EEZ. On the contrary, it is quite possible that coastal State rents from the relevant fisheries will be enhanced by accepting distant water nation participation.

The argument runs as follows. If a coastal State invites or willingly permits a distant water nation fleet to harvest a fishery resource within coastal fishery zone and/or process the catch, then one should think of the coastal State engaging in an international trade exercise in that it is importing harvesting and/or processing services from the distant water nation. Under any one of several circumstances it could prove to be less costly to the coastal State to employ the harvesting and/or processing services of distant water fleets than trying to supply them domestically. Hence by inviting or permitting the participation of distant water fleets in some aspects of some of its fisheries, the coastal State may actually increase the flow of rent over time it enjoys from the fishery resources. Moreover, this may be true even though the distant water nation enjoys a significant share of the global rent from the fisheries.

The apparent paradox is resolved when one recognizes that, by acquiring the lower cost services of the distant water fleet(s), the coastal State is increasing the total or global rent from the fisheries. This makes it possible for the coastal State to enjoy a larger rent from the fisheries than would otherwise be the case, even though the distant water partners enjoy a significant share of the rent.

Consider by way of illustration a joint venture arrangement in which a distant water fleet harvests a coastal State fishery resource and delivers the catch to onshore plants at an ex-vessel price of US$0.50 per kilo. Let it be supposed that, if the resource were to be harvested by coastal State fleets, the unit harvesting costs would be not less than US$0.80 per kilo. Thus by importing the harvesting services of the distant water fleet, the coastal State's rent from the fishery will be enhanced, even though the price of US$0.50 a kilo may allow the distant water fleet owners to enjoy substantial profits.

Our example was of a specific form of joint venture. The principles set forth, however, apply with equal force to all other forms of joint ventures and to arrangements in which distant water fleets both harvest the resource and process the catch and compensate the coastal State through direct payments in cash or kind.

If it is conceded that distant water participation in a coastal State's EEZ may enhance, rather than diminish, the coastal State's rent from the relevant fisheries, then two general conclusions follow with respect to the techniques to be used by the coastal State in extracting benefits from the distant water participants. First the appropriate form of distant water nation participation is presumably that which will maximize the coastal State's rent from the fishery over time. The appropriate form of distant water participation will in turn dictate the class of techniques that should be used. If, for example, it is in the best interests of the coastal State to have distant water nation participation take the form exclusively of joint ventures, formal or informal, then the benefits the coastal State obtains from the distant water participation will be entirely indirect. The various techniques for obtaining direct benefits from distant water nation partners will as a class, be irrelevant and assessment of individual techniques will be pointless.

The second conclusion is that where techniques for obtaining direct benefits from distant water nations are deemed to be appropriate, they must be judged in terms of their long run as well as their short run effects. This is in keeping with the point made earlier that, since rents from the fishery are sustainable, all management policies must be assessed in terms of their long run implications.

It is common to judge the aforementioned techniques in terms of their impact upon the current willingness of distant water nations to pay. They should also be judged in terms of their impact upon the long term willingness of distant water countries to participate in coastal State fisheries. Techniques that may appear to be successful in the short term, but which serve to undermine the arrangements with distant water nations over the long run, will result in the returns or rent from the fisheries enjoyed by the coastal State being less than the maximum over time.

The question of the short term and long term effects of the aforementioned techniques is given particular importance by the future investment problem to be faced by distant water nations as a group. It is generally recognized that most distant water nations are currently in a transition phase. At the commencement of E.F.J. they had large fleets in place for which there were few alternative uses. Thus they were and are presumably prepared to enter into arrangements with coastal States so long as they could/can expect to do somewhat better than cover their operating costs on a year-by-year basis.

Eventually, however, the vessels comprising the current distant water fleets will reach the end of their economic lives and will have to be scrapped. If the distant water nations are to undertake the heavy investment required to replace all, or even part of, the fleets, they must expect to receive returns over the lifetime of the capital embodied in the fleets that are sufficiently high to justify that investment.

It is virtually certain that what the distant water nation investors deem to be a minimum expected return on the fleet investment will be governed by the degree of risk associated with the investment. The degree of risk will, of course, be affected powerfully by the terms and conditions under which these fleet owners operate in EEZs. Thus, if coastal States use techniques for extracting benefits that serve to enhance the degree of uncertainty to which their distant water partners are subject, then this must act to reduce the willingness of the distant water partners to engage in fleet replacement over the long run.

One should observe in passing that the aforementioned uncertainty under which distant water countries operate is also affected by the other terms and conditions negotiated with the coastal States such as the length of term of the arrangements, e.g., whether a particular arrangement is to be in force for say three years as opposed to one year. It is questionable, therefore, whether the techniques for extracting benefits from distant water nations can be properly separated from these other terms and conditions.

In conclusion, techniques for extracting direct benefits from distant water nations should be seen as only one class of techniques for extracting benefits. There is no prior assurance that as a class these techniques will be appropriate. To the extent that they are appropriate, they must be assessed in terms of their long run, as well as their short run, impact.

We turn now and consider the techniques individually.

2. SPECIFIC TECHNIQUES FOR EXTRACTING DIRECT BENEFITS FROM DISTANT WATER NATIONS

My instructions call upon me to examine the following specific techniques:

i) Taxes on profits

ii) Taxes on catch and gross revenues

iii) Fees or taxes on vessels, vessel tonnage and gear

iv) Lump sum taxes or fees

In passing, my instructions also require me to consider a particular method of obtaining indirect benefits, namely through access to markets. This will be dealt with at a later point in the paper.

We shall attempt to assess the techniques in terms of four broad, and widely applicable, criteria. The criteria are:

(a) Level of administrative and enforcement costs required for effective implementation

(b) Tendency to distort fishing/processing operations of distant water partners

(c) Degree of seasonal or yearly risk imposed upon distant water partners

(d) Sensitivity to long term shifts in economic and biological parameters

Criterion (a) is concerned with all of the costs of regulating the activities of distant water fleets and vessels while in the coastal State's EEZ. Included are all costs of issuing licences, imposing and collecting fees and taxes. Of particular importance are the costs implementing surveillance procedures and the costs enforcing the terms of the arrangements.

In our earlier comments on net return or rent from the fishery, we emphasized harvesting and processing costs. Administration and enforcement costs cannot be neglected, however, and indeed may be of great importance. High administration/enforcement costs can easily result in the true rent from the fishery proving to be negative.

Surveillance and enforcement costs cannot be evaded without serious long run consequences. If inadequate enforcement procedures are implemented, the suspicion is bound to arise among coastal State managers that the terms of the arrangements are being circumvented. Indeed, if the enforcement is weak, the temptation on the part of distant water participants to engage in evasion may be irresistable. Thus relations between the partners are certain to deteriorate over time. Even if there is no formal rupture in relations, one can argue that the cloud of uncertainty created by the deteriorating relations will undermine the distant water partner's willingness to participate over the long run.

The difficulty and costliness of enforcement will, of course, be dependent upon the amount of information on the distant water partner's activities required by the coastal State for effective enforcement. Thus one can argue that, as a general rule, where coastal State enforcement capabilities are limited, coastal State-distant water nation arrangements placing heavy information demand on the coastal State are certain to be unstable over the long run.

Criterion (b) refers to the incentive the tax, fee or payment system employed gives to distant water fleet owners to implement relatively inefficient harvesting and/or processing methods. Thus suppose that in a particular fishery the least cost method of exploiting a resource was to use many relatively small vessels. The coastal State now imposes a heavy tax per ton per fishing day. Over time this induces the distant water partners to employ a few relatively large vessels, with each vessel having more catching power per ton than the smaller vessels. While harvesting costs are now greater, the distant water partners see themselves as benefiting because they are interested, not in harvesting costs alone, but in harvesting costs plus taxes. The sum of harvesting costs plus taxes will be lower than before.

The problem of induced inefficiency might appear to be a matter of concern only to distant water nations. This view is incorrect, however. The rent that the coastal State enjoys from the fishery over time must depend upon the magnitude of the global rent from the fishery. This will be true regardless of the degree of bargaining power possessed by the coastal State. Thus if the global rent is reduced because of the adoption of inefficient methods by distant water fleets, the coastal State must expect to suffer.

Criterion (c) refers, not to long run risks that are created by coastal State policies, and which are thus avoidable, but rather to intra-seasonal uncertainties associated with price and input cost fluctuations and with resource fluctuations due to environmental factors. As a consequence of these fluctuations, the returns from the fishery may be either unexpectedly low or high during a given season or year.

In any event, this form of risk is inescapable and must be borne by the coastal State, by the distant water partner(s) or shared by the two sets of partners. From the point of the coastal State, it may or may not make a difference whether the distant water nation partner(s) bear the risk in all or in part. The deciding factor will be whether the distant water fleet owners are risk averse, i.e., react negatively towards risk bearing. If the distant water fleet owners are risk averse, then they will require an extra return, or what be termed risk premium, in order to participate in the fishery. It will thus appear to the coastal State that the willingness to pay off the distant water fleet owners is reduced thereby. Consequently, where distant water fleet owners are risk averse, the benefits extracted from them by the coastal State will, other things being equal, be greater per period of time the smaller is the distant water fleets partner(s) share of the risk. It follows as well, of course, that the smaller the aforementioned owner's share of the risk the greater will be their willingness to participate in the relevant fisheries over the long run. Criterion (b) is linked to the previous criterion, as it is concerned to some degree at least with questions of risk. It is, however, primarily concerned with longer term changes, as opposed to seasonal fluctuations. Consider the following example. In many fisheries the costs of harvesting, and hence the flow of rent from the fishery, are affected by the density of the stock. Thus, if the stock is rebuilt as a consequence of management measures implemented by the coastal State, the global rent from the fishery will increase over time. If the techniques used by the coastal State are such that they are insensitive to the effects of the stock rebuilding programme, then all of the benefits from the programme may flow to the distant water nation partners. The consequence will be, either that the coastal State's interest in resource management will diminish sharply, or that the terms of the arrangement between coastal State and distant water partners will have to be subject to continual renegotiations. Either outcome will do nothing for the long term stability of the arrangement. For the sake of stability, one would want techniques that automatically maintained the rental shares of the coastal State and its distant water partner(s).

Now let us commence our survey of the individual techniques by considering taxes on profits, i.e., profit sharing. Since the object presumably of a coastal State-distant water nation cooperative fisheries arrangement is that of maximizing the flow of rent from the fishery over time and of sharing the rent in what is deemed by both sides to be an equitable manner, the profit sharing technique would seem to be an obvious one to adopt.

Indeed the technique appears to do well in terms of criteria (b), (c) and (d). The technique should prove to be neutral with respect to various methods of fishing and offshore processing. There is no obvious reason why the distant water partners should use other than the most efficient techniques of harvesting and processing. Secondly, the season by season risk should be shared equitably between coastal State and distant water partners. In a sense it would perform the same sort of risk allocating function that the share system does on individual vessels. Finally, the technique is sensitive to long term shifts in underlying biological and economic parameters. Thus, if the resource stock is built up or depleted, both partners will share automatically in the harvesting cost benefits, be these benefits positive or negative.

While the technique does well in terms of criteria (b), (c) and (d), it does badly in terms of criterion (a), the level of costs required for effective implementation. The costs of enforcement are immense simply because information requirements imposed upon the coastal State are immense. The coastal State must be able to assess accurately all aspects of the revenues enjoyed by the distant water vessels and all aspects of the vessel costs. Indeed even a full and accurate assessment of vessel revenues and costs may not be sufficient. If the vessels are delivering to home based plants, then there is an obvious opportunity for evasion through setting the ex-vessel prices at artificially low levels. If the plants are owned by the same companies that own the vessels, then the ex-vessel price will be a mere transfer price and thus readily subject to manipulation. If the plants and vessels are independent of one another, then evasion is only somewhat more difficult. It could be carried out fairly easily through under-invoicing. Thus the information required may well extend to the onshore processing sector.

So great are the information demands, so irresistibly easy is it for the distant water partners to engage in evasion, that arrangements resting upon profits' taxes must be viewed as inherently instable.

The alternative techniques on our list can all be viewed as means for taxing indirectly the profits earned by the distant water fleets. The indirect approaches have the advantage of being less demanding in terms of information and hence are more likely to be viable.

The first of these alternatives consists of taxes on catches. A tax on catch can be viewed as a type of royalty, a device which is used widely by governments in obtaining revenue from natural resource-based industries.

With respect to criterion (a), the costs of administration and enforcement, taxes on catch perform better than do profit taxes, simply because the information requirements are lower. Nonetheless, they are high. If the taxes are broken down finely among species and reflect the relative values of the species, then obviously close monitoring of the individual vessels will be required, almost certainly to the extent of placing observers on board individual vessels.

The coastal State may insist that the distant water vessel owners pay for the cost of the observers and believe that it has thereby escaped the cost burden. This is a delusion, however. The costs exist and will serve to reduce the global rent from the fishery. Thus they will affect the coastal State through an apparent reduced willingness to pay on the part of the distant water nation(s).

If the coastal State attempts to avoid information costs by applying the taxes to broad as opposed to narrow, categories of species, then another problem or cost will arise. Distant water vessels may have an incentive to discard low valued species within each broad species category. This will entail, not only loss of revenue for the coastal State, but management difficulties as well. The resource managers' estimates of the fishing mortality of the aforementioned low valued species will be faulty.

With respect to criterion (b), there are no reasons, that are obvious to the author at least, why taxes on catch should produce serious distortions of fishing or processing operations.

Next with respect to criterion (c), the imposition of seasonal risk upon distant water partners, taxes on catches must be given a mixed rating. Risks arising from seasonal fluctuations in resource availability will clearly be shared by both distant water nation and coastal State partners. Risks arising from short term fluctuations in prices of fish or fish products and of costs of inputs will, however, be borne entirely by the distant water nation partners.

The burden of risk imposed upon distant water nations arising from fluctuating prices can be reduced by establishing the taxes on a sliding scale, i.e., sliding up or down according to price movements. As such they would become taxes more on gross revenues from harvesting as opposed to catches per se.

Taxes on catch, or variants such as taxes on gross revenues, provide a good example of the types of difficulties implied by criterion (d). Suppose, by way of example, that in a particular fishery, the coastal partner as resource manager undertook to build up the relevant biomass over time. Suppose further that the increased biomass density resulted in a gradual decline in harvesting costs. Unless the tax on catch could be geared to increase steadily with the growth in biomass density, the benefits would flow directly to the distant water partner. Conversely, of course, if the coastal State authorities were to permit substantial depletion of the resource the burden would be borne largely by the distant water nation.

One possible, and indeed likely, outcome of this state of affairs is that coastal State's interest in effective management of the resource would wane. The coastal State would neither benefit directly in the short run from good management nor suffer directly from poor management. Over the longer term, however, the coastal State would suffer. The coastal State's waning interest in effective management must increase the uncertainties faced by distant water fleet owners and thus undermine their willingness to participate in the relevant fisheries over the long run.

The third technique on our list consists of taxes or fees, e.g., licence fees, on vessels and/or gear. It is necessary first to make a distinction between those taxes or fees that are essentially seasonal lump sum taxes and those that are taxes on fishing effort. Thus a licence fee per vessel or per ton (or what amounts to the same thing as a tax per vessel or per ton) that is paid each year at the

beginning of the fishing season is, in effect, a lump sum fee or tax, as opposed to a tax/fee on vessels or tons per fishing day (week, etc.). At this point we shall focus on effort taxes and shall return at a later point to various forms of lump sum taxes.

If it is possible to think of taxes on catches as being indirect taxes on profits, it is equally possible to view taxes (fees) on effort as indirect taxes on catch. If the tax on effort, e.g., per Gross Registered Ton (GRT) per fishing day, is accompanied by an effort allocation on a per country of per fleet basis (as seems inevitable), then the tax will in fact be an indirect tax on catch. The effort allocations will almost certainly be based upon the coastal State's estimate of the amount of effort, e.g., fishing days required to take the catch deemed appropriate for the distant water partner.

Since effort taxes are one further step removed from profit taxes, they are less costly to implement than taxes on catch. It is easier to monitor the number of days a vessel is operating in the coastal State's zone than it is to monitor the vessel's catch. There is, of course, an offsetting cost in terms of effective management in that the coastal State authorities obtain only an indirect measure of catch.

Controls on fishing effort, be they quantitative or monetary, are notorious for producing distortions in fishing operations. Fishing effort has so many facets that it is impossible to tax or control them all. Vessel owners, fleet owners, are thus given an obvious incentive to avoid the taxes or controls by emphasizing the untaxed or uncontrolled aspects of fishing effort. Thus a tax on effort in the form of a tax per GRT per fishing days does not allow for the fact that harvesting power per ton will vary among vessels. Consequently, one can expect that the taxed fleets will be biased towards larger vessels with more harvesting power per ton. Clearly, then, effort taxes fare less well in terms of criterion (b) than the other techniques considered so far.

Effort taxes also fare less well in terms of criterion (c). In addition to the risks associated with taxes on catches, distant water partners will be subject to risks arising from the fact that catches per unit of effort will fluctuate. The fluctuations may arise because of variable stock abundance or because of variations in the "catchability" of the gear.

Finally, with respect to the last criterion, sensitivity to long term biological and economic shifts, it is certain that effort taxes will fare no better than taxes on catch. Whether they will fare worse is not at all clear.

The last technique on the list consists of lump sum payments or taxes in which the distant water partner pays a fixed amount at the beginning of each year or fishing season. The fee or tax may be established on a fleet, vessel, or ton basis, or some other basis entirely.

If a tax on effort can be seen as an indirect tax on catch, then lump sum taxes or access fees can be seen as an indirect tax on effort. Presumably in giving foreign vessels access rights for a limited period of time, the coastal State authorities will make a rough estimate of the average number of fishing days per vessel implied by these rights for each type and class of vessel.

As the technique is the furthest removed from the profits' tax, the technique has the great advantage of low administrative costs and more importantly low enforcement costs. The coastal State authorities have only to be assured that a given distant water nation vessel is duly licensed and that it has not exceeded its time allowance within the EEZ. The low enforcement costs should help to promote long term stability of the cooperative agreements or arrangements. There is, of course, an offsetting cost in terms of management effectiveness.

With respect to criterion (b), distortion of fishing operations, lump sum taxes tend to bring about distortions in fishing/harvesting operations the more narrowly defined they are. Thus suppose, for example, that the tax was so narrowly defined as to be applied to specific items of gear. The distant water vessel owners would then have an obvious incentive to modify their gear or obtain substitutes in order to reduce the impact of the tax.

Perhaps the most negative aspect of the lump sum tax is that virtually the entire seasonal risk is imposed upon the distant water nation partner(s). Effort taxes were seen to impose a greater share of the risk burden upon the distant water nation partner than taxes on catch because they did not allow

for variations in catch per fishing day. Lump sum taxes or fees go one step further and make no allowances for variations in days fished per vessel per season.

Finally, with respect to the last criterion, lump sum taxes display no sensitivity whatsoever to long term shifts in biological and economic conditions. This is so virtually by definition.

In reviewing the techniques for extracting direct benefits from distant water countries, one can discern a distinct and simple pattern of tradeoffs. The technique of taxes on profits constitutes the most demanding of the techniques in terms of information required by the coastal State for effective implementation, with all that that implies for long run stability of coastal State-distant water nation relations. On the other hand, it is also the technique which shares most evenly seasonal risk between distant water nation and coastal State partners. Furthermore, it is sensitive to long term shifts of economic and biological conditions. Finally, it probably acts to distort fishing operations less than any of the other techniques.

At the other end of the spectrum stand lump sum taxes or payments. They are the least demanding in terms of information required of the coastal State. At the same time, however, they impose a maximum share of the seasonal risk burden upon the distant water nation partner, are insensitive to long term shifts in biological and economic conditions and can easily lead to distortion of distant water nation fishing operations. Thus one can make the following generalization. The more demanding a technique is in terms of information required for effective implementation, the better it will perform in terms of risk sharing and in terms of not inducing inefficiencies in distant water fishing/processing operations. Moreover, the more sensitive it will be to long term shift in biological and economic parameters.

This suggests the following. One can expect that coastal States will opt for a mix of techniques, rather than for one particular set. One should expect further that the balance of the mix will reflect the coastal State's ability to mount effective surveillance and enforcement procedures. Thus it would make little sense for a coastal State with very limited enforcement capability to rely upon taxes on catch, let alone taxes on profits. The benefits in terms of risk sharing and neutrality with respect to harvesting/processing operations would be overwhelmed by the fact that the coastal State's arrangements with its distant water partners would be made inherently unstable by the use of the technique.

Finally, in response to the last of my instructions, I offer a few comments on the reliance of coastal States upon access to markets as a means of obtaining benefits from distant water partners. I view access to markets, not as a technique unto itself, but rather as an equivalent of a lump sum tax in which the payment is indirect, rather than direct.

There is a case to be made for using access to markets as a means of payment. Distant water nations like other countries, do protect domestic markets. Thus, their domestic prices for some fish and/or fish products may be significantly higher than world prices. Consequently, if the coastal State is able to surmount the trade barriers of its distant water nation partner(s), it can hope to gain additional revenues on the sale of its fish products. Having said this, however, one must also emphasize that the granting of improved access to markets is only but one means by which a distant water nation may compensate a coastal State. Moreover, the benefits provided are uncertain. The uncertainty arises because it is often unclear what the coastal State would have earned on the sale of its fish products without the trade concessions. Consequently, it is very difficult to argue that there is any justification for coastal States relying primarily upon trade concessions as a means of compensation.

Writing from a North American perspective, this author can only observe that many coastal States, e.g., Canada and the United States, do place heavy reliance upon access to markets as a means of compensation. Taxes, fees, etc. tend to be relegated to the role of obtaining partial recovery of the costs of administering the EEZ. The consequence is that such coastal States in fact severely restrict themselves in terms of the benefits they can obtain from distant water nation activity in their zones.

While this self-imposed constraint on the part of a given coastal State may appear to confer important benefits upon distant water nations, the benefits are short term at best. It is inevitable that it will become widely recognized within the coastal State that the benefits to be enjoyed from cooperative arrangements with distant water nations are meagre. Indeed it may be suspected that the

benefits are negative. As an equally inevitable consequence, groups within the coastal State will press for increased restrictions on distant water fleets with a view towards the ultimate exclusion of the fleets from the coastal State's EEZ. Thus over the long run the cost to distant water nations arising from a coastal State's refusal to make full use of taxes and fees could be just as great as the cost to the coastal States themselves.

4. CONCLUSIONS

In this paper we have attempted to examine and assess several of the techniques coastal States may employ to extract direct benefits from distant water countries operating in their EEZs.

After considering the techniques as a group in relation to the overall problem of coastal State resource management, it was argued that, before assessing individual techniques, one has to ask whether the techniques as a group are in fact appropriate. It is possible that the returns resource rents that the coastal State realizes from its fisheries may be greatest if it obtains benefits from distant water nations largely through indirect means. Secondly it was pointed out that, to the extent that the aforementioned techniques are appropriate, it is of great importance that they be judged in terms of their long run as well as short run consequences.

With respect to the individual techniques, it is clear that there exists a clear tradeoff between factors that are likely to reduce the distant water partners' willingness to pay such as risk and distortion of fishing/processing operations and the difficulty of effective implementation. We noted that difficulties of implementation held implications, not only for administrative costs but also for the long term stability of the coastal State-distant water nation fisheries arrangement.

In light of these tradeoffs, it seems reasonable to suppose that most coastal States will opt for a mix of techniques. The appropriate weighting of the mix should reflect the coastal State's enforcement capabilities.

ANNEX 12

GENERAL GUIDELINES FOR MONITORING, CONTROL AND SURVEILLANCE

Extract from
Report on an Expert Consultation on Monitoring, Control
and Surveillance Systems for Fisheries Management
Rome, 27-30 April 1981

Objectives

The overall objectives of monitoring, control and surveillance need to be carefully defined and evaluated with regard to each State's special situation. States must determine the relative importance to them of monitoring, control and surveillance for the purposes of: (a) maximizing net benefits from the fishery resources in their zones, with regard to domestic and/or foreign fishing; (b) maximizing net benefits from other resources and uses of the zones (e.g., minerals exploitation); (c) implementing customs and quarantine regulations; (d) producing information on quantity and value of resources; (e) meeting domestic fishermen's demands (realistic or not) for protection from foreign fishermen; (f) exercising national sovereignty; (g) enhancing navigation, search and rescue services; (h) protecting marine environment; and (i) other. Evaluation of the importance of these objectives will help determine optimum kinds and levels of investments in monitoring, control and surveillance.

Benefits and Costs

Benefit/cost analysis (broadly defined and applied) should be used to estimate the appropriate levels of investment in MCS. Since States have limited funds for such investments and since it is generally impossible to achieve 100 percent compliance, it is necessary to determine how much, if any, investment will produce the optimum effects. Theoretically, this would occur where marginal costs and benefits are equal; that is, where the cost of the last additional unit of investment in MCS is equal to the benefit it produces.

In practice this is difficult to measure, particularly when long-term effects are taken into consideration. For example, the analysis should attempt to estimate how much fishing by foreign vessels is likely to occur in the future. On the one hand, increasing prices for fish products may support continued distant-water fishing. But on the other hand, rising costs (particularly for fuel) may considerably decrease distant-water fishing and, therefore, decrease the need for MCS with regard to foreigners.

Difficulties on cost/benefit analysis also results from the problems of quantifying some of the benefits, such as meeting the demands of domestic fishermen for protection from foreigners.

In spite of the difficulties, the effort to identify and evaluate costs and benefits will help in determining appropriate levels of investment, even if the results are imprecise and the analysis is unsophisticated.

Relationship Between Coastal State Costs and Regulations

The costs of monitoring, control and surveillance to coastal States depend upon the nature of the agreements and regulations being enforced, for both foreign and domestic fishermen. For example, flat sum payments for access by foreigners are less costly to enforce than royalties on catch. The latter, however, produces higher revenues to coastal States and greater control over resource exploitation. Also, closed seasons are generally less costly to enforce than mesh regulations and incidental catches. Thus (a) the trade-offs between monitoring, control and surveillance costs and the benefits of the regulation or agreement must be considered, and (b) those responsible for adopting regulations or negotiating agreements must work closely with those responsible for monitoring, control and surveillance.

Relationship Between Fishermen Costs and Regulations

The imposition of monitoring, control and surveillance measures generally creates costs for fishermen (e.g., port inspections, provisions for observers). These costs will reduce the amount that foreign fishermen are willing to pay for fishing privileges or will reduce net revenues to domestic fishermen. These effects should be considered in the choice of regulations and agreements.

Perceptions of Risks of Non-Compliance

Fishermen will comply with regulations and agreements only to the extent that they feel will benefit from them or to the extent that they feel that non-compliance will be more costly than compliance. Their perceptions of the risks will include the chances of being observed, the chances of being apprehended, the likely sanctions that will be imposed, and the chances of escaping sanctions through bribery. Their perceptions of the risks to them of non-compliance must be enhanced in all respects.

Relationships Among Phases of Enforcement

Effective enforcement systems must include surveillance, arrest, the imposition of sanctions, and reporting. Although much attention is given to the first two, the last two are not always adequately covered. If the penalties extracted are insufficient, surveillance and arrest activities will be ineffective. If reporting of sanctions is not adequate, perception of risk will be low. Thus, those responsible for enforcement should coordinate their activities with judiciary bodies and make use of other agencies (e.g., foreign ministries) to ensure adequate sanctions and reporting. The imposition of sanctions can sometimes be facilitated through the provision of discretionary powers to administrators and through the creation of special courts.

Institutional Means for Reducing Costs

Enforcement officials should seek low-cost institutional methods for achieving their objectives or for supplementing investments in monitoring, control and surveillance hardware. Several possibilities can be explored. One is to rely on "good will" and to use diplomatic routes to encourage compliance by foreign fishermen. Many governments will be willing to exercise controls over their fishermen in the interests of maintaining good relationships with other countries. Another technique is to make fleet privileges contingent upon compliance by all individual vessels. A third technique is to require foreign governments to maintain a responsible representative in the coastal State so that communication of violations will be expedited. A fourth is to require foreign vessels to post bond. A fifth technique is to provide incentives for compliance or for measures that facilitate control such as the reduction of fees for fish landed in national ports. In some cases, these (and other similar) techniques may be more cost/effective than hardware and in many cases they will greatly increase the cost/effectiveness of hardware.

Simplicity of Rules and Agreements

Every attempt should be made to keep the regulations and agreements as simple as possible. This will reduce the costs of monitoring, control and surveillance both to the State and to the fishermen (domestic and foreign). In some cases, regulations are deliberately made complicated not for the purpose of protecting resources but for the (hidden) purpose of making foreign fishing uneconomic. These reduce potential revenues to the coastal State and increase the costs of enforcement. Simplicity of regulations and agreements can be achieved by increasing the discretionary powers available to enforcement officials (although means must be found to ensure that such powers are not abused) (see "Support for MCS" below).

Regional Cooperation and National Sovereignty

The costs of monitoring, control and surveillance can be greatly reduced by regional cooperation and the sharing of authority. This is particularly true for shared stocks but is also important where a foreign fleet fishes in the zones of neighbouring States. The benefits of cooperation need no elaboration. However, it is essential to recognize that States are reluctant to cooperate when such cooperation impinges on their national sovereignty. Realistic assessments of national sovereignty constraints must be made and means found to increase cooperation within those constraints.

Bribery and Extortion

It must be recognized that bribery and extortion can significantly impede the achievement of enforcement objectives. Regulation and agreements should be formulated in such a way as to reduce the opportunities for bribery and extortion. For example, the use of on-board observers might be supplemented by random checks or port inspections. Authorities with discretionary powers must be subject to checks and balances to prevent abuse.

Support for Moniroting, Control and Surveillance Administration

Monitoring, control and surveillance activities, particularly with regard to domestic fishermen, do not generally receive much governmental or political support. Where enforcement measures are designed to protect the interests of one group of fishermen (e.g., artisanal fishermen) from the activities of another group (trawlers), political support may be weakened. Furthermore, fishery administrators tend to receive more rewards for development activities than they do for management. Efforts should be made to convince high level non-fishery government officials and politicians of the importance of monitoring, control and surveillance. This can be facilitated by pointing out the disbenefits or costs from not having an MCS system.

Incentives for Self-Interests in Compliance

By far the most effective enforcement occurs where it is in the self-interests of the fishermen to ensure enforcement. Self-interests are greatly enhanced if the fishermen perceive that the benefits of the regulations will accrue to them. This, in turn, is enhanced if the fishermen have some form of exclusive rights to the resources. (As an analogy, enforcement is generally unnecessary in agriculture where private property rights are available.) The provision of exclusive rights, such as community franchises to artisanal fishermen or exclusive rights to groups of fishermen, can significantly reduce the costs of monitoring, control and surveillance.

In the absence of exclusive rights, self-interest in enforcement will be enhanced if the fishermen perceive that the regulations are necessary for the realization of benefits in the near future. This means that there must be a high degree of credibility in the scientific justification for the controls.

Conversely, monitoring, control and surveillance costs will be great where fishermen perceive that they will not benefit from the controls. This will occur where the controls are designed to re-distribute wealth (as in prohibitions against trawling within 3, 7 or 12 miles). It will also occur if the present sacrifices produce future benefits that can be captured by new entrants.

Establishing Controls Prior to Over-Investments

Monitoring, control and surveillance can be established more effectively prior to over-investment than after over-investment has taken place. If the regulations are designed to reduce excessive labour, directly or indirectly, the costs of enforcement are likely to be particularly high. However, the imposition of regulations prior to the time when the needs are accepted by the fishermen is extremely difficult to do. Development programmes should, therefore, seek to establish the basis for control prior to the development of a new fishery or new technique.

Effect of Monitoring, Control and Surveillance on Accuracy of Data

Certain kinds of regulations and agreements (e.g., tax on catch) provide an incentive for fishermen to mis-report their catches and/or effort. This effect should be anticipated and means must be found to ensure accuracy of reporting or, if this is not likely to be effective, alternative regulations should be considered.

Appropriate Monitoring, Control and Surveillance Technology

The need for appropriate technology is just as relevant for monitoring, control and surveillance activities as for fishing and should be considered when recommending monitoring, control and surveillance activities for developing countries.

Checks and Balances

Reliance on a single technique for monitoring, control and surveillance should be avoided. Wherever possible, a variety of techniques should be used to ensure effectiveness. For example, requirements for log books should be supplemented with other techniques to verify the accuracy of the log books.

Surveillance to Determine Enforcement Needs

Before investing in monitoring and control capability, it is desirable for coastal States to determine the degree, type and seasonality of poaching by foreign vessels. This can be achieved by some investments in surveillance. Such surveillance could indicate that poaching is so negligible that no further investments are warranted. Or if poaching is significant, it can determine the type (trawling, longlining, purse seining, etc.), the location, nationality, and the seasonality of the poaching so that monitoring and control capabilities can be designed appropriately.

Periodic Re-evaluation

It is important that enforcement systems be periodically re-evaluated to ensure their effectiveness and as a means for testing alternative techniques.

Attitudes Toward Monitoring, Control and Surveillance

Monitoring, control and surveillance activities will be more effective if they are viewed by fishermen in a positive rather than a negative manner. Monitoring, control and surveillance activities should not, therefore, be solely restricted to the apprehension of offenders. Instead, monitoring, control and surveillance forces should provide services beneficial to fishermen (e.g., navigational aid, search and rescue services, collection and dissemination of information) and should respect their bona fide interests (e.g., waiting completion of a haul before boarding).

ANNEX 13

ACCESS CONDITIONS AND COMPLIANCE CONTROL

by

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INTRODUCTION

The new United Nations Convention on the Law of the Sea accords coastal States sovereign rights over fisheries in exclusive economic zones extending to 200 miles offshore. The vast majority of the world's fisheries are encompassed by such zones. What the coastal State may do with respect to foreign fishing within such a zone, in particular by way of creating conditions of access, appears to be relatively unfettered under the convention (see paper by Burke). Within the last 5 years or so most coastal States, spurred by the provisions being developed at the Law of the Sea Conference, have established jurisdiction over fisheries in 200 mile zones, in which they have prescribed conditions of access for foreign fishing. The interaction of foreign fishing with various 200 mile fishery regimes, and corresponding conditions of access, has matured sufficiently to evaluate the experience to date.

This paper examines conditions of access both in terms of the positive and negative relationship, to compliance by foreign fishing vessels, and of the supporting interests underlying the conditions. Compliance, in this context, means the degree to which foreign fishing conforms its activity to that which a coastal State requires, or desires and expects, with respect to a 200 mile fishery zone. Foreign fishing includes foreign fishing vessels as well as their flag State, fishery-related industrial associations and may include other fishery-related interests as well.

Conditions of access should be understood to include both the procedure and substance of what might be referred to as systems of access for foreign fishing.

The process of access generally entails a government to government relationship, usually an agreement, pursuant to which an allocation, either in terms of effort or catch or both, is given to the flag State. Thereafter, individual vessels may apply for permits, receive and pay for the same (or for fish caught in some cases). The substances of access conditions are embodied, respectively and variously, in the bilateral agreement, fisheries legislation, fisheries regulations, licence conditions and administrative actions by the coastal State. Except in the agreement, access conditions are in form, though not always in fact, unilaterally prescribed by the coastal State and not per se the subject of negotiation. In fact, however, not only the agreement but many of the unilaterally imposed conditions are often the product of consultation if not outright negotiation and agreement. The Law of the Sea Convention (Art. 62(5) requires notice to be given of conditions. In practice many countries afford an opportunity for consultation as well.

Both the coastal State and foreign fishing have their own respective interests and needs regarding access to the coastal State's 200 mile fishing zone. Both sets of needs and interests must be considered in discussing the relationship of access conditions to compliance. In particular, the effectiveness of a coastal State's management of its fishing zone vis-a-vis foreign fishing is largely evaluated on its choice of access conditions and the extent of compliance therewith by foreign fishing.

On the other hand, the needs and interests of foreign fishing must also be considered not only for their own sake but also because, at least in many 200 mile zones, the process of compliance by foreign fishing is, to a significant degree, a function of self-regulation or, conversely, the lack of compliance is largely a function of the lack of self-regulation. Self-regulation includes both individual vessel self-regulation and flag-State regulation or control of its vessels and requires that the needs and interests of foreign fishing be given consideration in any fishery regime. This is especially true where the coastal State lacks effective means for direct surveillance and enforcement. In this regard, fisheries

compliance is a process that is somewhat similar to the process of compliance by taxpayers with domestic tax regimes. Self-regulation implies the need for a reasonable, workable and understandable system of access conditions as seen from the foreign fishing vessel's and flag State's perspective. It also, of course, must be 'credible', subject to verification and at least partial enforcement.

As will be discussed in this paper, self-regulation is cost effective and desirable from the coastal State's and, arguably, from the flag State's perspective. Self-regulation is best facilitated by a bilateral agreement, as opposed to unilateral prescription by the coastal State. The agreement process tends to ensure that an account be made of each party's needs, that understandings be achieved, and that the access sytem be reasonable, workable and understandable. Further, an agreement obligates the flag State affirmatively to ensure that the agreement is fulfilled. The flag State may not be as inclined to actively assume such obligation with respect to unilateral coastal State regulation. However, to seek agreement on an issue implies the matter is somewhat negotiable and trade-offs inevitably occur. Coastal States must weigh the advantages of agreement on an issue versus unilateral prescription which limits, if not outright prevents, trade-offs and compromises on the particular condition to be required.

COASTAL STATE AND FOREIGN FISHING INTERESTS

(a) Objectives of access

The objectives of foreign fishing concerns in obtaining access to fishery resources under coastal State extended jurisdiction are, generally, simple and straightforward, and do not go beyond the desire to secure access to supplies of fish, whether for the supply of home markets, for use in existing processing industries or as a source of hard currency, and the desire to avoid economic dislocation of sectors of the economy hitherto dependent upon distant water fishing operations. The objectives of a coastal State with respect to foreign fishing in its waters, on the other hand, will vary very considerably depending on its economic situation and stage of development and its fishery management goals. For many developing countries, having little or no locally based fishing industry, the main concerns may well be to secure revenue or other benefits in kind, while at the same time gathering information on the fishery resources available in waters under its extended jurisdiction and the feasibility of commercial fishing operations based on those resources. For other countries with more developed local fishing industries, optimum utilization of the fishery resources of its coastal waters may imply little room for foreign fishing, with the emphasis on increasing catch rates of local fleets, although even in such circumstances, foreign operations may often conveniently be used as a buffer for domestic management, it being easier for the coastal State to reduce effort through limiting foreign rather than domestic operations. The overall objectives of the coastal State will obviously determine the nature and stringency of the conditions to be imposed on access. In one situation effective controls over the amount of fish taken in the coastal States waters may be of the essence. In another the emphasis may be much more on ensuring that revenue is not diminished.

(b) Interests with respect to compliance control conditions

With respect specifically to compliance control conditions, the coastal State and foreign fishing concern have both conflicting and convergent interests. They share an interest in the proper and efficient management of a target fishery, to the extent that such management tends to increase the value of the fishery. Subject to this, and in-so-far as fisheries represent an economic activity, both coastal State and foreign fishing concern also have a convergent interest in minimizing the costs of implementation and administration of compliance control conditions in order to maximize the total net economic benefits available from the fishery as a whole. Conflicts of interest arise more over the manner in which these benefits are to be shared. In this context the coastal State has a legitimate interest in asserting cost-effective compliance control over both authorized and unauthorized operations both for the purpose of revenue verification (i.e., existence of foreign fishing operations, effort, catch and value of catch) and for management purposes. It is also concerned to obtain a reliable supply of information on operations being undertaken in its waters on which to base its management of the fisheries and indeed its future plans for local fisheries development. The interests of the foreign fishing operators, on the other hand, are more to secure the maximum freedom from burdensome controls and the easiest mechanisms for gaining access to resources together with the maximum security possible for continued access, and the least enforcement of revenue and similar obligations.

Even here though, the interests, though divergent, are not unrelated. The coastal State, for example, cannot impose effective though over-burdensome conditions on foreign fleet operators if it wishes to retain foreign fishing in its waters and to attract voluntary compliance with its access requirements. The foreign fishing operator for his part will have a substantial interest in promoting a stable and mutually satisfying relationship with the coastal State that can only be based on a history of adequate compliance.

In short: firstly, the more an access system accommodates the legitimate needs of a foreign fishing interest, the more likely it is that the foreign fishing interest and its flag State would participate in self-regulation which, correspondingly, diminishes in degree the need to employ costly "hard enforcement"; secondly, the more divergent the interests of the coastal State and the distant-water State, e.g., protecting competing domestic fishing interests or demanding high fishing fees, the less likely it is that the system can tend to be self-regulating and the greater the need for the "hard enforcement".

EXAMINATION OF ACCESS CONDITIONS RELATED TO COMPLIANCE

This portion of the paper examines access conditions and associated measures (e.g., sanctions), as related to the process of achieving compliance by foreign fishing. How a particular condition may be correlated, either positively or negatively, with compliance, will be discussed as well as the attendant costs to the coastal State and foreign fishing interests. Emphasis will be placed on those measures that tend to reduce the need for hard enforcement and, to the extent that entails greater self-regulation, the interests of both coastal State and foreign fishing vis-a-vis access will be borne in mind. Where appropriate, recommendations will be suggested, especially as to the desirability of requiring particular conditions in terms of their costs and possibly positive or negative impact on compliance in general. It should be borne in mind that, in general, the greater the costs to either the coastal State or foreign fishing of a particular access condition, the more likely it is that the net revenue to the coastal State will be diminished. For that reason, if no other, access conditions should have demonstrable utility to coastal State needs.

The following discussion is organized into five areas:

1. Control of unauthorized fishing
2. Information generation
3. Operation conditions
4. Legal/financial conditions
5. Sanctions

1. Control of unauthorized fishing

The threshold of compliance is to ensure that only licensed vessels engage in fishing. While this task, to a larger extent, can only be accomplished by physical surveillance and surface control, certain requirements are of valuable assistance. However, requirements imposed on unlicensed vessels may impinge upon their right to navigate freely through exclusive economic zones as provided in Article 58 (1) of CLOS. On the other hand, it can be, and has been, argued that some requirements, like stowage of gear and even entry and exit reporting, do not deny, or even impinge on, freedom to navigate and are a legitimate and necessary exercise of a coastal State's sovereign right to protect its economic interests in the zone. This is a delicate issue and beyond the scope of this paper. The United States' sensitivity to this issue is perhaps revealed in-so-far as not only are unlicensed vessels not required to report entry and exit, but even licensed vessels are not required to report entry or exit (rather, licensed vessels only report commencement and cessation of fishing operations).

Several coastal States require vessels to report when passing through areas within the zone in which they are not authorized to fish. Further, unlicensed vessels that may pass through a fishing zone are occasionally and/or potentially required to report prior to or upon entry and exit. Frequently the advance notice required is at least 24 hours. In some instances, the report must include catch on board at entry and departure. Further requirements for transiting vessels include stowage of fishing gear and the maintenance of an expeditious course through the zone. These conditions may be complemented by the coastal State's definition of fishing. In particular, some States have defined the act of fishing in such an inclusive manner that if gear is not stowed, or if the vessel is doing anything that could be considered as even exploring for fish, i.e., meandering or scouting, the vessel may be considered "fishing".

These conditions are of great utility in eliminating the possible defense of an unlicensed vessel that it was merely transiting, not fishing. The reporting requirements also aid by narrowing the scope of the enforcement authorities' surveillance efforts. Transit reporting coupled with position reporting by licensed vessels should enable the authorities to account for every fishing vessel within the zone at any point in time. The utility of that information is, however, questionable if there is no meaningful surveillance capability.

Another aspect of control over unlicensed fishing can be found in some fishing agreements whereby the foreign flag State may be required to appoint a legal agent, establishing legal jurisdiction in absentia over both licensed and unlicensed vessels. Further, pursuant to such agreement, the flag State may be obliged to ensure that all of its flag vessels, licensed or not, comply with the coastal State's requirements, which assists in controlling unlicensed fishing.

The costs to the coastal State for transit reporting are the potential overloading of its communication facilities and digestion of the information reported. Further, if there is no means of meaningful surveillance, reports of transit are probably of little actual value. Of course, if such requirement impinges on freedom of navigation the coastal State may be exposed to charges of violating international law.

The costs to the transiting vessel can be substantial. The process of reporting may be inconvenient depending on the facilities used and the substance of the information required. More significantly, the requirement that such reports be 24 hours, or more, in advance may be especially problematic for the vessel that is passing through several small zones or which in mid-voyage decides to go to another ground (in 24 hours, a fishing vessel may travel some 250 miles).

Meaningful stowage of gear is, for some types of fishing vessels, either impossible or very inconvenient and thereby impinges on freedom of navigation. For instance, a pole and line tuna boat cannot, it appears, meaningfully stow its gear so as to be incapable of fishing on short notice. The same conclusion appears to be true for purse seining and trolling vessels. However, trawl vessels and others may be capable of meaningfully and fairly conveniently stowing their gear. In any event, it is not always clear what stowage of fishing gear really means - perhaps that gear is carried or placed in circumstances so that it is not readily available for deployment in fishing. In-so-far as vessels with gear not "stowed" may be exposed to substantial legal penalties and thus should have some meaningful opportunity to satisfy the requirement, it is desirable that criteria be established as to what constitutes "stowage of gear" for particular types of fishing vessels.

2. Generation of information

Almost every coastal State requires foreign fishing vessels to supply information regarding the vessel, its position, its catch and activity. This information is useful for numerous management purposes, but it also frequently can, and does, aid in achieving compliance.

Prior to receiving a permit or licence, foreign fishing vessels are usually required to submit an application. The application elicits information describing the vessel, its dimensions, gear and other particulars (occasionally a photograph is required), the name and addresses of the officers and crew and occasionally, in varying detail, information as to ownership of the vessel and other economic interests behind the vessel.

The information describing the vessel is of obvious use in enforcement and compliance related measures. If the vessel has a history of violations it may not receive a licence. Background information is useful in identifying a vessel from an observation and in ascertaining the scope of its probable activity while in the zone. Occasionally, an application format may be quite complicated and difficult for the fishermen to complete, which may lead to inaccuracy. In situations where the same vessels fish in several neighbouring coastal zones it is in everyone's interest to follow a similar application procedure in terms of both format and substance.

Information relating to ownership and other economic participation is valuable for the coastal State in ascertaining who might be notified in case the vessel is arrested and subject to fine or forfeiture. Such information is also useful in giving a coastal State a more complete picture of what interests actually, or potentially, benefit from, or are economically affected by, the activities of a particular vessel. The owner and mortgagee could, and indeed should, be contacted directly in seeking

settlement of a dispute or impending forfeiture. They also should be contacted regarding reported transgressions or other incidents of non-compliance by the vessel. Owners and creditors, e.g., banks, are generally quite interested and concerned in knowing about any circumstances that may jeopardize their financial interests or security. Disclosure, or the threat of such disclosure, of non-compliance in this manner tends to encourage the operator of the vessel to take greater care in complying with the coastal State's law and fishing agreement.

Determining the nature and scope of economic participation can be a complex exercise. For instance, if the vessel is owned by a large corporation, should the coastal State demand the names, nationality and degree of investment of each individual shareholder? This could be quite cumbersome for all concerned. Should the names, nationality, extent and nature of financing of the various creditors of a vessel be required? What about creditors of the owner corporation? Obviously some lines have to be drawn regarding information on underlying economic interests in a particular vessel, but some information regarding the most directly affected economic interests could be quite useful to the coastal State, for instance, the name of the owner and, if corporate, basic information regarding shareholdings and the name of primary creditors of the vessel.

Information on economic participation in a vessel may be considered sensitive and perhaps confidential in nature. Its disclosure may constitute a considerable, even intolerable burden for the foreign fishing vessels. Some countries may have domestic laws that profit the disclosure of certain types of economic participation and for the coastal State to require such disclosure may force the corresponding fishing vessel to either fish illegally or not fish at all. Further, the mechanics and substance of disclosure can be complicated and somewhat difficult to keep current. A coastal State probably is well advised not to require, by way of a unilateral measure, extensive financial/ownership information unless it has ready means to digest and use such information. However, it may well wish to reserve that right and explore the issue with foreign fishing interests.

Several coastal States require the submission of a proposed fishing plan. This plan might be separately submitted, either formally or informally, or included in the application itself. The degree to which various coastal States require strict adherence to a plan varies. It is a useful tool in monitoring a particular vessel's activities and allows the coastal State to anticipate such activities and deploy its surveillance capabilities accordingly. Of course, the plan may serve other management interests as well; this is true for most of the conditions discussed in this paper.

To require a foreign fishing vessel to anticipate and adhere to a plan where it will go and what it will do and what it will catch may be considered a significant burden, especially in fisheries where it is virtually impossible to predict one's fishing activity. The primary burden besides the administrative overhead of developing a plan and submitting it is that it can significantly and artificially constrain the fishing vessel's flexibility to pursue its harvest under changing circumstances. This need can be accommodated by allowing variations in the fishing plan provided prior notice is given thereof. Again this creates some costs for foreign fishermen by way of increased communications and potential disruption of their operation. In some fisheries the requirement of the fishing plan may be easily met; in other fisheries such as tuna purse seining it may be impossible or extremely difficult to detail a planned course of operation. In any event, the coastal State should tailor its fishing plan requirements to particular fisheries and allow some flexibility - to do otherwise may just encourage or in fact compel non-compliance.

The next category of information that is useful for compliance concerns reporting by fishing vessels. Reporting by fishing vessels is at the heart of the self-regulating process; in general vessels are required to self-report subject to random - or in some systems, not-so-random - checks to conform accuracy.

Generally, vessels are required to report at varying intervals, e.g., daily, every third day or weekly, their position and time of position. This information is useful to monitor vessel movements and to allocate surveillance capacity. However, depending on the frequency and the nature of the reports, such reporting can create substantial administrative overhead, overload communication systems and generate perhaps unnecessarily detailed information. Indeed, it is questionable how necessary position/time reporting is as an aid to compliance unless the coastal State has the means to absorb and to use such information. In particular, if the coastal State has no, or limited means of surveillance, self-reporting of position is not useful, at least in the short run, for compliance purposes.

Again, for many coastal States it may be best to reserve, in their legislation or regulations, the right to require position reports but not actually require the same, and thereby incur the costs and possible diminish revenue, unless or until there is clear utility in doing so. Position reports may be valuable in discerning fishing patterns and movements on the medium and long term basis, but the same information can be derived from catch logs - see below.

For those countries that require a fishing plan and adherence thereto, position/time reports are not as necessary and perhaps need not be required at all. In this regard, some countries only require position/time reporting with respect to major shifts in fishing operation, i.e., leaving one fishing ground for another and the like. Some States also require that when reporting position/time, the vessel report the presence of any other foreign fishing vessels, licensed or unlicensed, of which it is aware. Of course this is useful information to the coastal State as an enforcer, but it can place a foreign fishing vessel in the somewhat untenable position of an informant, a role it may not wish to assume.

Many countries, as mentioned earlier, require prior notification of entry into the zone as well as exit from the zone for both licensed and occasionally unlicensed fishing vessels. The same considerations mentioned before regarding unlicensed vessels apply to licensed fishing vessels. In particular, the burden of reporting entry and exit 24 or more hours in advance, especially in areas of several adjacent fishing zones, can prove to be an unenviable and perhaps unworkable task for the fishing vessel, especially a transiting highly mobile vessel. Coastal States in some instances have tried to accommodate this problem for licensed vessels by allowing two categories of entry-exit reporting: one category for the initial entry and the final exit and another category, which does not require advance notice, where a fishing vessel is merely crossing boundaries in pursuit of its fishing activity. Presumably such reporting aids in monitoring activities of the vessels, but as a practical matter for many coastal States there would appear to be no immediate utility in knowing such information. However, just as in position reporting, there may be a long term use of such information in ascertaining fishing patterns and movements as well as cross-checking reported catch activity.

Besides reporting anticipated entry and exit, a foreign fishing vessel is often required contemporaneously to report catch on board. This information can be used to establish subsequent catch violations. Again, however, if the coastal State has only limited means physically to inspect catch on board, this information is not very useful. Nonetheless, entry/exit reporting, complete with catch-on-board information, and even reasonable position/time reports while within the zone can be said to encourage a more disciplined pattern of behaviour by foreign fishing vessels vis-a-vis the coastal State's fishing regime and, to that extent, may be of medium to long term utility. But if too burdensome, such requirements may tend to discourage compliance. Further, if such requirements are largely ignored and incapable of enforcement by the coastal State, the credibility of the entire access system tends to deteriorate. A fishing vessel must evaluate the risks of (1) only being able, or willing, partially to comply with a fishing regime and thereby expose itself to sanctions that are more readily applied to licensed vessels fishing pursuant to a fishing agreement and, thereby, more subject to coastal State authority, or (2) fish without a licence, not submit to coastal State authority, avoid exposure to readily enforced sanctions and accept the comparatively smaller risk of being detected and seized by the coastal State.

In addition to reporting of position and time, virtually all coastal States require some form of catch and effort reports. Typically, a coastal State will require catch-effort information to be recorded currently in a prescribed log format on board the vessel. Additionally, some States require the vessel while fishing to report periodically by radio, or other electronic means, the same sort of catch and effort information.

Logs of catch and effort are usually to be maintained current on board and to be available for presentation upon request, usually during an on-board inspection or when calling in port. Further, most, although oddly enough not all, States require subsequent submission of the logs upon completion of their voyage. The requirement of keeing the vessel's logs up-to-date and on board is to aid inspection efforts and to avoid the possibility that the fishing vessel fills out the catch log upon his return to the home port. To allow the fishing vessel operator, or anyone else for that matter, to fill out the log sheets after the voyage is completed creates a greater opportunity to manipulate the information on a fleet-wide basis, or otherwise. Nonetheless, if the coastal State has no means effectively to require contemporaneous presentation of the log-sheet during the fishing operation,

there is no assurance that it will be kept on an up-to-date basis as opposed to subsequent completion or adjustment.

It may be useful for the coastal State to pattern the required catch log format to follow the system or format that may be required from a foreign fisherman by his own flag authorities. This eases the administrative burden and alleviates possible confusion for the foreign fisherman and may enhance accurate reporting. Further, if several neighbouring coastal States are regulating the same group of fishing vessels, it is advidable for those States to coordinate and even standardize all reporting requirements, including catch log formats; again this increases the likelihood of accuracy and utility in management, as well as alleviates any unnecessary burden on, or confusion for the foreign fishing vessel. In any event, the log format should not be overly complicated or detailed so that it can be completed without undue difficulty by a fisherman at sea and the information required should be limited to that which is actually and realistically needed for the particular coastal State management needs. In terms of aiding compliance, a written log is useful not only to establish what was caught but also can be used as an admission in court by the fishing vessel if the log reveals illegal activity. Information from logs can be compiled to develop a picture of past fishing patterns which may be useful for a variety of purposes. Logs should be required; they are not costly to anyone, they are a good source of information and are not less likely to be accurate than radio reporting in the absence of air surveillance.

The requirement that in addition to the maintenance of logs, catch information be reported periodically, by radio and other electronic means, generally is to serve the purpose of monitoring quotas and/or establish a current basis for fees. These reports may be required on a daily, bi-weekly, weekly or other basis. If a coastal State is not closely regulating its fishery in terms of quotas or limits on species of fish to be caught it would not appear too necessary to require contemporaneous transmission of such information; a subsequent submission of log sheets would suffice. However, there may be value in using such reports as a means to verify the subsequently submitted log sheets under the theory that, if the vessel operator is going to manipulate the information, it is more difficult to do so, and thus more likely to be revealed, if such information is required in two or more formats, e.g., radio reports and logs, at various times. Reporting such information by electronic means may overload available communication facilities of both the vessel and the coastal State and can be a significant burden for the fishing vessel, especially if the required format is complicated and overly detailed. A coastal State probably is well advised to require such radio or telegraphic catch reporting only if it serves a real, immediate, management need or can be proven useful as a verification device.

Catch information is largely a function of self-reporting and must be considered suspect in the absence of verification. This is especially likely because such information can, and almost surely will be, used to the detriment of the foreign fishing interest. That is, if the foreign fisherman is fishing against an allocation, the more catch he reports the quicker he reaches his quota and will be required to cease his fishing. Also, catch and effort information is used at one time or another, in some manner or another, as a basis for the coastal State to establish a fishing fee. Thus the greater the catch reported by the foreign fisherman, presumably the greater the fee he will have to pay at some point or other. (This linkage is more direct where the fee is charged as a percentage of actual current catch and quite a bit less direct under other systems. Possibly, the less direct the linkage the more likely catch information will be unaffected, in degree, by the economic consequences.) Thus, the foreign fisherman has sufficient motivation to under-report his catch to the degree possible. Indeed, it has been often observed that the accuracy of catch and effort information throughout much of the world may have significantly deteriorated in the wake of extended coastal State jurisdiction because of the built-in bias in reporting. The only way to combat this tendency is to have the ability to verify the reports. Verification is at best difficult, costly (observers, inspections) and rarely comprehensive.

The most desirable, cost-effective, verifiable and accurate means of ascertaining catch and activity information is to require a full voyage report by way of a log (i.e., not just while within a particular zone) supported by authenticated documentation of catch offloaded at landed places. If regionally oriented coastal States uniformly required this information, in a standardized format, the need for radio reporting of catch would be largely eliminated (for many States at least), the administrative burden for foreign fishing would be greatly reduced and the accuracy and value of the information would or should be significantly enhanced and subject to more efficient means of verification.

3. Operational conditions

Access conditions concerning the operation of foreign fishing vessels roughly fall under three categories:

(a) Passive conditions

(b) Conditions requiring some sort of response by the foreign fishing vessel under certain circumstances

(c) Conditions which limit aspects of the fishing vessel's operations or activities.

Among the conditions that can be considered passive in nature are the requirement that fishing vessels display certain markings or identification symbols, fly their flag of registry, have certain position fixing and communication equipment on board, and maintain a licence and up-to-date prescribed log on board.

Several coastal States require fishing vessels to display their international radio call sign on both sides and, occasionally, on the top side of the vessel. The numbers and letters of the radio call sign are usually required to be in contrasting colours and of certain dimensions, frequently one metre in height. This sort of requirement coupled with the requirement to fly its flag renders the vessel capable of ready identification by air or surface surveillance. The advantage of requiring the symbols of the international call signs is that most fishing vessels have an individual call sign and once the symbols are so displayed the vessels are satisfactorily identified for many coastal States purposes. However, some coastal States require a more individualized form of identification, including the display of their own permit numbers on the vessels. This appears to be unnecessary since it is not difficult to link a particular call sign, or equivalent international identification, to a particular vessel permit number and thus alleviate the burden of the vessel having to individualize its markings for one fishing zone and possibly having to change such markings as it passes onto other fishing zones. If a fishing vessel is small, it may be difficult to comply with the requirement that its identification symbols be of certain dimensions, thus there may have to be some flexibility on the coastal State's part to accommodate certain size vessels. The requirement that the identification marking be displayed on the deck of the vessel is also occasionally problematic depending on the nature of the vessel and its decks. However, the display of such information is quite useful to the coastal State in expediting its air surveillance, and unless the vessel is quite small and there is no available surface area on its decks or on top of the bridge, this requirement is productive and reasonable. Coastal State identification marking requirements should be standardized and be based on international call sign or equivalent.

The requirement that the fishing vessel's licence be maintained on board is designed to aid enforcement officials in ascertaining whether the vessel is authorized and to be able immediately to ascertain the conditions of such authorization, presuming the conditions are contained on the licence itself. The only possible difficulty for a foreign fisherman in maintaining a licence on board lies in the mechanics of actually getting a piece of paper from the coastal State onto a vessel. This difficulty is not to be under-estimated, especially where fishing vessel licences are issued for relatively short periods, thus forcing the foreign fishing vessel repeatedly to go through the mechanics of acquiring the physical licence. Some coastal States actually send a specified quantity of licences to the flag State of the foreign fleet for subsequent distribution to the vessels while in home port. If this approach is followed, some leeway must be given to allow vessels at sea an opportunity to pick up licences on their next return to home port. Other coastal States require the vessels or a vessel from a fleet to come to port and to pick up the licences and distribute the same to fellow members of the fleet while at sea. Several coastal States do not require permits on board, or, even if required, do not enforce this requirement. Rather they rely on their own information as to which vessels appear in the coatal State's records as having been issued a licence. This approach appears to be satisfactory from the coastal State's point of view in that it should be easy to ascertain from its records whether a particular vessel has been issued a licence or not without requiring the permit to be on board. However, some States may lack the means of acquiring that information readily and may desire absolute certainty of licensing by requiring the document to be on board.

Some coastal States use a licence format to give very specific instructions to the vessel as to what it can or cannot do and for that reason it is important that the vessel operator has a licence on board for ready reference. Also, several coastal States make use of this licence requirement to make

annotations on the licence itself of any warnings given or inspections completed. To the extent the instructions on a licence are individually tailored, it seems necessary that each vessel has a licence on board. Otherwise, if the instructions are general in nature, it appears possible for the coatal State to send such instructions out en masse to the foreign fishing State for distribution to its vessels.

The purpose of requiring vessels to maintain certain types of position-fixing equipment is to accommodate the possibility of requiring vessels to maintain an electronic transmitting device to be used via satellite, or otherwise, to give position and time. As far as is known, no coastal State currently imposes this requirement on fishing vessels but rather reserves the right to do so. Should the technology be feasible to utilize this method of surveillance and information gathering, it would appear to be possible to eliminate a great deal of reporting requirements currently required of fishing vessels and at the same time increase both the quantity and quality of the information received by the coastal State regarding the fishing vessels' activities. Because transmitting devices are not seemingly actively required by any coastal State, the subject will not be further discussed. It might be mentioned, however, that many fishing vessels now maintain satellite navigation devices which are capable of printing a continuing series of position fixes which would establish the location and course of any particular vessel. To the extent such record is authentic and tamper-proof, the information could be quite valuable to a coastal State where, for instance, a dispute as to the vessel's course or location may have developed. Again, as far as known, neither satellite navigation equipment nor copies of print-outs of such devices are actually required by any coastal State.

Coastal States requiring specified communication equipment presumably require specified radio or radio-telegraphy equipment. The compliance aspect of this requirement is obvious: to be able to communicate to the vessel directly for the purpose of giving instructions and/or receiving reports and general communication with coatal State authorities. While this is certainly a useful tool for the coastal State, there can be some problems for the foreign fishing vessel. In particular, language is frequently a problem, although that difficulty could be overcome by a language requirement, e.g., an interpreter on board. Some States require an interpreter to be on board but, for many fisheries, perhaps all, this would not seem a practical nor reasonable requirement to be applied across the board.

Further, some communication equipment may not match with the coastal State's equipment, and some fishing vessels may not have any suitable radio communication capability nor a realistic possibility of acquiring the same (Taiwan). Even those vessels that have suitable communication equipment must also have a qualified international operator of such equipment to communicate to citizens of another State. Certain vessels cannot afford or otherwise do not have such personnel. Generally, even if vocal radio communications are somewhat difficult due to language or equipment, it should be possible and generally satisfactory to communicate directly to a foreign fishing vessel using radio telegraphy or other forms of international communication, e.g., flags or certain movements. As for radio reports, these can be relayed through the flag State or a local representative, thus alleviating language/equipment difficulties though increasing the cost somewhat.

Occasionally, coastal States use the so-called "message drop" as a means of furthering their inspection of a vessel or actually to facilitate a seizure. Message drop simply means that when a vessel is spotted by an aircraft (or other platform observation), the aircraft, or observer, either literally drops some sort of message in a canister near the vessel or communicates directly with the vessel on its radio equipment and orders it to proceed to a designated port for further inspection. This approach eliminates the need of actually having to intercept a fishing vessel while at sea by a surface patrol craft. Of course, it is much more likely that a vessel will do what is has been instructed to do if a surface patrol craft is in the vicinity. However, under the perceived or a real threat of certain sanctions that could be employed by the coastal State if the vessel refused to do as ordered, many vessels have affirmatively responded to the so-called message drop. In utilizing a message drop, the coastal State should be aware that the diversion of the vessels over what is often a great distance to the nearest port of inspection can be extremely costly for the vessel involved and is a sanction in and of itself. Accordingly, to order the vessel to call at a port should be tempered by a reasonable probability that the vessel has actually violated some provision of the fishery law. Also, there is ample room for confusion and misunderstandings in voice communication, or even identifying the authority of the ordering party, which should be taken into account.

A second category of operation conditions is those that require some sort of response, under certain circumstances, from the foreign fishing vessel. These include: the obligation to comply with instructions of coastal State officials, to accept boarding parties, to allow and not to otherwise impede inspections by officials, to accept and accommodate on-board observers, and to appoint a national or a fleet representative to act as a liaison with the coastal State.

The general requirement to comply with coastal State officials' instructions is obvious and almost universally required. Port calls by way of message drops and the like have already been discussed. The requirement to accommodate boarding and inspection parties can pose a problem for the foreign fishing vessel if the officials desiring to board and search are not clearly identified or known as authorized representatives of the coastal State. In particular, in many parts of the world fishing vessels are very, and understandably, reluctant to allow their vessels to be boarded by parties unknown or not fully identified. This must be taken into account by the coastal State and there must be an understanding between the coastal State and the foreign fishing interests as to means of identification and procedures to be followed. In many instances, the coastal State will be well advised to ensure that its inspection officials are adequately trained and follow set procedures to avoid potentially serious confrontations. Boardings at sea are frequently hazardous both physically and procedurally, and difficulties should be anticipated and addressed.

Many coastal States require that foreign fishing vessels accept on-board observers. Indeed, in the United States, the law calls for 100 percent observer coverage of foreign fishing. The cost of the observers, including their maintenance and wages is generally, though not always, required from the foreign fishing interest. Provided that the observers are trained personnel, they constitute a very effective means by which to monitor and verify activities of foreign fishing vessels. However, numerous difficulties may arise if the observer is not a trained individual or if the fishing vessel is not cooperative in accommodating the observer's activities. To this end, the role of the observer should be clarified. In particular, is the observer an enforcement officer, a scientist collecting information, and/or a monitor/reporter? If the role of the observer includes that of an enforcement officer, he or she may find that role very difficult to perform and it may compromise other, non-enforcement functions.

The logistical difficulties of conducting an on-board observer's programme are manifest. Whether or not it will work frequently depends on the nature of the fishery, the circumstances of the coastal zone and the coastal State involved. For instance, in an inshore, geographically defined fishery that employs large fishing vessels, an observer programme may not be so difficult to accomplish. On the other hand, in a very large, dispersed fishery utilizing numerous small vessels that do not call in local ports, a programme would pose considerable difficulties and costs, especially if the programme is intended to be comprehensive. Questions as to how and where to embark and disembark observers, accommodations for observers, communication facilities and so on can plague an on-board observer programme. It should also be pointed out that an observer is often in a fairly lonely position in a potentially hostile environment and may be subject to hazards. The observer, especially if he or she performs in an enforcement capability, is very susceptible to improper influence from the foreign fishing vessel or, indeed, coercion.

Whether it is possible or practical to employ on-board observers or not, the utility to the coastal State for compliance purposes is considerable. Observers not only can accurately report and confirm what occurs on board their particular vessel but also can report on the activities of other vessels in the vicinity. Further, it is possible to extrapolate from one observer's report as to the activities, including catch rates, of other, similarly situated foreign fishing vessels. (For developing States, an observer programme may have secondary value in that it exposes the observer to the technology and methods employed by foreign fishing vessels and, for that matter, because the costs will be paid by the foreign fishermen, it creates new employment opportunities.)

However, from the foreign fishermen's point of view, it is clear that the requirement to take observers on board is a considerable burden, both in an operational sense and because of the substantial cost that may be involved. Indeed, there are coastal zones in which foreign fishermen refuse to seek licences precisely because of observer requirements. In this regard, if the observer requirement is unduly burdensome for the foreign fishing vessel, especially where the vessels are small and ill-equipped to accommodate another person and if it depends upon very large or wide-ranging fishery, an

extensive mandatory observer programme may well encourage unlicensed fishing. For that reason, if for no other, the coastal State will be well advised to at least seek an appreciation of foreign fishermen's possible difficulties with regard to the observers and to try to accommodate the same.

Many coastal States require the foreign fishing interest to appoint a local representative for the purpose of acting as a liaison on behalf of the vessels. This can be a valuable and convenient means to facilitate transactions and communications between the coastal State and the foreign fishing vessels and thereby greatly enhances compliance in a cost-effective manner. It shifts the responsibility from the coastal State to the local representative having to deal with numerous foreign fishing vessels for reports, licence distribution, and numerous other administrative details (see, for instance, New Zealand and Canada local representative requirements).

Individual foreign fishermen also are forced to organize and coordinate their activities within a fishing zone by having a deal with their own representative on a collective basis. However, in situations where foreign fishing vessels only sporadically, or to a very limited degree, fish in a particular coastal State's zone, possibly because the zone is quite small or fishing opportunities are limited, it may not be realistic to expect the fishermen to appoint an agent. Indeed, to require a representative under those circumstances may encourage non-compliance, i.e., unlicensed fishing. It may be possible and certainly desirable for similarly situated coastal States to require a regional representative to represent the foreign fishermen fishing sporadically or to a limited degree within several proximate zones.

The cost to the foreign fishing interest of maintaining a local representative, while not crippling, may be substantial, depending on the scope of the representative's duties. However, the same functions would have to be discharged by someone in any event and a local representative may serve the interests of both the foreign fishing interest and the coastal State.

The final category of operational conditions includes effort-restrictions, restrictions on landing and transhipment of catch, stowage or gear and port calls. Both the stowage of gear and on-demand port-call requirements have been discussed and need no further mention except to comment that they do constitute restrictions, in some cases quite severe restrictions, on the operations of fishing vessels and are also quite valuable as compliance tools.

Coastal States often impose restrictions on various aspects of foreign fishing effort (sometimes referred to as "windows" and "boxes"). These restrictions, as most conditions of access, serve purposes other than compliance. However, effort restrictions are also quite useful to coastal States in achieving compliance. In particular, coastal States may limit the number, or the type, of fishing vessels and the area and time in which they operate, which reduces the scope of activity to be monitored by the coatal State and allows for a more efficient employment of surveillance activity. Of course, restrictions on area, time, number of vessels or even gear merely for the purpose of narrowing the coastal State's enforcement responsibilities can be a very harsh compliance tool from the perspective of the foreign fishermen. Accordingly such restrictions should, and usually do, serve other purposes as well and, in any case, should be reasonably designed to accommodate the legitimate interests of the foreign fisherman to conduct expeditiously and efficiently his fishing operation. For instance, it would not be reasonable, and indeed would encourage non-compliance, for a coastal State to limit a tuna fishery to a small, segregated geographical area. If a balance can be struck, some limits on area and time may serve compliance purposes; but they may also tend to reduce revenue otherwise available to the coastal State from foreign fishing.

Another very important effort restriction is a limitation on quality and/or species of fish that may be caught. However, such direct limitation on catch cannot be considered an aid to compliance; rather it compounds compliance difficulties for both the coatal State and foreign fishing interests. It is one thing to seek compliance in terms of requiring licences, reporting and payment of fees and quite another to limit numbers and species of fish actually harvested.

Some coastal States require, or reserve the right to require, a percentage of catch to be landed locally and, while this is primarily done for other purposes, it also contributes to compliance in the same way as mandatory port calls. The vessel must call in at port for unloading and can be inspected at that time. However, it would not appear reasonable for a coastal State to require local landing

merely for the sake of obtaining compliance. The requirement that no fishing vessel transship its catch unless previously authorized is an aid to compliance in that it assists the coastal State to monitor and control catches of vessels while in its zone.

Mandatory port calls, for inspection, at time of entry and prior to exit are occasionally required. While this is doubtlessly a very valuable and cost-effective (for the coastal State) method of achieving compliance, the burden on foreign fishing vessels is considerable. Frequently zones are quite large and the distance from a target fishery to the nearest port can be great and the corresponding costs in fuel and time substantial. This may be especially so, for example, where tuna longlining operations are concerned, if they are conducted only on the fringes of the 200 mile zone. The incentive not to comply with this requirement, especially if surveillance is weak, must be considered very high. Nonetheless, for certain offshore fisheries, port calls may represent the best means to ascertain and verify accurate catch information and control the vessels in general.

4. Financial/Legal Conditions

By requiring certain financial and legal conditions to be met by foreign fishing vessels, coastal States create circumstances that aid in compliance. For instance, a few States purport to require foreign fishing vessels to establish a bond to secure satisfactory performance. While this is a very useful and cost-effective tool in encouraging compliance, as well as providing the coastal State a ready source from which fines can be claimed, it could be somewhat costly to the foreign fishing vessels, especially if they fish in several zones, each requiring a bond. It may also diminish revenues otherwise available to the coastal State. To require a bond for every fishing zone, large or small, is not feasible. However, where a group of States have consolidated their management on a regional level, or where a coastal State controls a major fishery, it would appear more promising to require a bond. The expense of bonding to a foreign fishing vessel is not inconsiderable and they would want to ensure that adequate safeguards are in place to protect their bond from arbitrary forfeiture, partial or total.

The United States requires the local representative to maintain a letter of credit to pay assessed fishing fees. This concept could be used as a cost-effective enforcement aid as well, e.g., if a court judgement is presented, the terms of the letter mandates payment. The same considerations regarding bonding would apply from the foreign fishing perspective. Seemingly no other coastal State requires a letter of credit and it is not currently used as a compliance method.

Short of bond requirements, some coastal States require the flag State, or fishing association, to serve as a guarantor, in varying degrees, of its vessel's performance. For instance, if a judgement for a violation is entered (for either unlicensed fishing or violations by a licensed vessel), the flag State may be required to secure payment of the fine, or exercise its best efforts to do so. Depending upon the responsibility and capability of the guarantor, this is a very beneficial and inexpensive method of encouraging compliance. It is inexpensive because, like the bond, it alleviates the need for a coastal State to physically arrest a vessel; rather, if a violation can be independently established, the vessel can be proceeded against in abstentia under some coastal States' legal systems.

The guarantor obligation creates just that; a considerable obligation, and possibly considerable costs, for the flag State or fishing association. Some flag States can exercise considerably more control over their fishing vessels than others. If the flag State is unable to compel its vessels to pay the fine, it will end up with the loss. However, most fishing is conducted pursuant to an agreement and an agreement implies obligations and the capability and intention to carry out those obligations. If a guarantee or bond or even liquidated damages can be the object of agreement then the method of compliance control can work, and work well, because a flag State doubtlessly will feel more obligated to fulfil the terms of that which it has formally agreed than terms that are unilaterally prescribed by coastal States. This is one of the main reasons why States should consider using agreements as a vehicle for establishing access conditions. Certainly some coastal States have succeeded in requiring agreement to some form or other of outright indemnity from parties responsible for foreign fishing (see Australia, Taiwan) and many more require, by agreements, the flag State to shoulder part of the burden of ensuring compliance (the burden of detecting violations, however, remains uniquely the coastal State's).

Just as the method and substance of effort restrictions can affect compliance, so can the method of charging a fishing fee. For instance, if one lump sum is charged for an entire fleet, and the burden is correspondingly on the fleet to distribute the charges and ensure that every one pays his share. Anyone not paying or otherwise sharing is cheating not so much the coastal State as the other members of his fleet that assumed the lump sum obligation. This will result in pressure from the fleet on its membership to comply and pay for a licence. Whereas, if it is left to each individual vessel to apply and pay for a licence, there is less, or no incentive for the peer group or association to pressure individuals to comply. Thus, the coastal State bears the burden of ensuring all member vessels pay a licence fee. There are, of course, other reasons for not requiring a lump sum fee, but compliance does not appear to be one of them.

The requirement that a legal agent be appointed to accept legal process, and establish legal jurisdiction, on behalf of individual foreign fishing vessels is a useful and cost-effective tool to achieve compliance. Sometimes, though not necessarily, the legal agent is the same as the already mentioned local representative. However, a legal agent is often merely a vehicle whereby a coastal State can legally proceed in a court of law against a transgressing fishing vessel, even if the vessel was only detected by air surveillance, or otherwise, and no physical arrest or custody of the vessel was ever achieved. That is, firstly, the legal agent establishes the court's jurisdiction over the represented vessel and, secondly, by serving the legal papers on the agent, the coastal State is legally considered as having served the same on the fishing vessel. The vessel is thus considered as having an adequate opportunity to appear in court and respond. If it does not choose to appear then a default judgement can be entered against it. The judgement can then be satisfied pursuant to the bond, indemnity or equivalent guarantee pursuant to an agreement with the flag State. Again, it is desirable if not outright legally necessary to have an agreement, as opposed to unilateral prescription, to appoint an agent and assume a guarantor responsibility. The agent is not normally legally responsible on his own account for activities of those he represents. Used in conjunction with an indemnity, bond or guarantee, this process can result in a sanction or penalty while largely obviating the need to intercept the offending vessel and escort it to port (it does not, and should not, eliminate the need for objectively and convincingly establishing a violation, however).

In requiring a local legal agent to be appointed, the coastal State should take care to ensure that the appointor, usually the flag State or fishing association, makes the appointment on behalf of all its constituent members, including both licensed and unlicensed vessels, and on an individual basis. Accordingly, the terms of appointment should be carefully expressed.

The appointment of a legal agent can be very effective, in terms of cost and otherwise, for the coastal State. For the foreign fishing interest, there is not a great cost involved other than the potential ease of enforcement and the possibility that the process can be abused if there are insufficient procedural safeguards. For instance, the coastal State can file a somewhat unsubstantiated complaint and force the foreign fishing vessel to settle rather than incurring possibly substantial costs to go to the coastal State and defend the matter. The foreign fishing vessel has a legitimate interest in assuring that any legal process taken against it is fair and subject to procedural and substantive legal safeguards.

It should be noted that at least one coastal State requires the local representative/agent to be financially and legally responsible for the foreign fishing vessel. It is not clear whether this means the agent, in his own right may be held legally and financially responsible for the actions of foreign fishing vessels, i.e., pay the fine out of his own funds, or not. If this is the requirement, then the agent's role is similar to that of a bonded agent and a great deal of the costs of enforcement for the coastal State thereby could be diminished although the risk for the agent is considerable if he is liable in his personal capacity.

Foreign fishing vessels are generally required by law to accept boardings, inspections and searches even though the same may be conducted without a warrant. Under the US system, this legal provision has effectively defused, to date, several procedural defenses that might have otherwise been available to foreign fishing vessel searched and seized without a warrant and thus aided in enforcement. (Note: the US law still requires the official to have a reasonable suspicion that a violation has occurred, so the process is not completely arbitrary.)

Coastal States frequently create legal presumptions to aid in enforcement. For instance, for the purpose of forefeiture, fish found on board are, rebuttably, presumed to have been caught within the zone. (Note: if vessel is transiting, some States require a report of catch at time of entry and, if such report is not made, fish found on board are presumed to have been caught within the zone.) As mentioned earlier, transit reporting in general may tend to create a legal presumption of illegal fishing, or at least shifts the burden, if a vessel fails to report. Since it is generally illegal "to fish", how a coastal State defines fishing also aids in enforcement. For instance, under US laws, not only is a wide range of activities defined as "fishing" but anything done that could reasonably be expected to result in the capture of fish is "fishing", including at the extreme, the searching for fish by electronic or visual means and, as such, is illegal unless licensed. This definition is somewhat related to the already mentioned stowage requirements; if the gear is not "stowed" or not placed in a condition so to be not readily available for fishing it may create a presumption of illegal fishing in addition to being a direct violation in and of itself.

It is possible to require foreign flag States, by agreement generally, to implement legal measures designed to ensure their vessels fish legally. In at least two instances, flag States have implemented legal measures to require their fishing vessels to comply with other coastal State fishing laws (see Spain and Taiwan). Indeed, Spain requires that any of its vessels fishing in another State's zone possess a Spanish licence as well; the requirements for a Spanish licence include evidence of a licence issued by the relevant coastal State. Taiwan, by regulation, imposes its own domestic punishment for Taiwanese fishermen who violate the laws of other coastal States. Even where flag States have not developed legal measures to this end, there are numerous instances where they have taken punitive action against their vessels, or citizens, in response to requests by an aggrieved coastal State.

Generally, the flag State is in a much better position to impose punishment and control its citizens and vessels, although the coatal State still bears the burden of establishing violations. It is in the interest of the flag State to take steps to compel compliance by its vessels, especially if it has been consulted as to the substance of some, or all, of the access conditions and has agreed to abide by them. However, the coastal State cannot shift the entire burden of compliance to a flag State and to the degree it does, must realize that the flag State will assist only to the degree that what is being required and enforced, including the process of establishing a violation, is viewed as reasonable and convincing from its general perspective as well as its system of law.

5. Sanctions

While sanctions are not necessarily conditions of access, a discussion of the effect of such conditions on compliance necessitates a review of the wide array of sanctions available to the coastal State. Sanctions may range from fairly straightforward fines and forfeitures where a violating vessel has been seized to economic, political or legal sanctions on a fleet-wide basis for the indiscretions of one member. Additionally, the compliance value of fisheries-related sanctions lies, to a large degree, not in what actually may be imposed by way of a direct penalty but rather the potential, even if remote, calamity that could befall in the wake of non-compliance. To review sanctions, they are divided into two rough categories: those that are directly imposed on an offending vessel or operator and those that are more indirect in nature.

Most fishing laws provide for a schedule of fines for various offenses. Fines usually should bear some relation to the perceived seriousness of the offence, e.g., illegal fishing vs. tardy reporting of exit from the zone. But the coastal State must also consider the deterrent value of a fine. Under many circumstances the economic advantage achieved by the violation, e.g., over-fishing, may exceed the costs of a fine. Thus the fine is not a deterrent in that the risk is economically justified. Not infrequently, the time elapsed from the infraction to final payment of the fine is one year or more due to court proceedings and the like. Under these circumstances, the fine's value as a deterrent is also diminished, especially if the vessel is allowed to continue fishing in the interim. Moreover, rarely does a fine offset the costs incurred by the coastal State in detecting the violation and seizing the vessel. However, where the fine is sufficiently large, the fishermen may not be able to pay it.

Perhaps for these reasons, as well as others, many States allow a court to order forfeiture of catch, gear and/or vessel. Indeed, some States allow no discretion but automatically require forfeiture upon convinction of illegal fishing. The forfeiture of a vessel remedy has great psychological impact and conclusively deters that particular vessel from future violations. Moreover, the often staggering costs to the vessel owner of having his vessel seized and tied up is a sanction in and of itself and

encourages settlements. Indeed, the process of seizure and holding a vessel where the violation is minor or dubious can be abused in-so-far as the vessel may be effectively coerced to settle to avoid further costs of the vessel's remaining inactive and of remaining under seizure and taking legal action far from home to challenge the prosecution. Most States, and the CLOS Convention, allow for "prompt" release on bond - but prompt cannot be soon enough for a seized vessel and the costs of bonding can be considerable.

There are some problems with forfeitures for the coastal State. First, depending on the nature of the vessel and its catch, and the needs of the coastal State, the catch and vessel may be of little value; rather, they may be somewhat of a burden to dispose of. Indeed, in one instance, a State forfeited a chartered vessel, put it up for auction and had only one bidder - the charterer who was also the offender. He purchased the vessel for a pittance and saved himself a great deal of money in charter fees (it is possible to profit from one's own wrong-doing). This story also points out the possibility that a forfeiture does not always punish the violator but rather punishes the sometimes distant and uninvolved economic interests behind the vessel (or course, such action may cause such interests to become involved with the operation and compliance of the vessel, as mentioned earlier).

A forfeiture can be costly to the coastal State. Having lost their boat, the crew has no transportation and possibly no means to provide for themselves. The costs and responsibility of transporting and providing for the crew not infrequently falls on the arresting authority and not infrequently is considerable and problematic. Disposal, by auction or otherwise, of the vessel and catch can also be problematic, especially where no market exists and almost always involves considerable costs and unexpected difficulties. For these reasons and others, mandatory forfeiture may be counter productive. States have been compelled by their own law to order forfeitures even where their other diplomatic and economic interests clearly indicated a forfeiture was not desirable.

In general the remedy of forfeiture should be left to the discretion of the court. Additionally, it may be desirable to allow, as some States have provided, a forfeiture of only part of a vessel, that is, a proportionate monetary value equal to some or all of the value of the vessel. Further, because of the frequent difficulties of disposal, some States allow forfeiture of the monetary value of the catch on board, rather than the actual catch. Both approaches alleviate the sometimes undesirable aspects of having to seize physically the vessel and catch and sell the same.

To ensure that the person who committed the violation is punished, some States impose fines on the person or, more significantly, ban that person from the fishery. In some instances, a ban from an important fishery effectively precludes the banished from all future employment as a fisherman. This, of course, is a substantial deterrent to those who are in best position to avoid violating the law in the first place. While imprisonment is sometimes provided as a penalty, it is contrary to provisions of CLOS Art.73(3) unless agreed to otherwise.

Some States have discovered, somewhat to their surprise, that permit sanctions, e.g., no permit to be issued for a period of time, are more effective deterrents than direct monetary fines. A licence to fish is a privilege, not a right, and can be prospectively withdrawn at the coastal State's discretion. However, a licence that has been issued, and paid for, cannot be so readily withdrawn under some systems of law. Nonetheless, if legal permission to fish in a particular zone is of a certain value, then the threat to withhold it can be a powerful sanction. Of course, a permit sanction is only as valuable as is the legal right of access to that particular zone. Therefore, in a relatively unimportant fishery, or an unenforced one, a monetary fine is a stiffer sanction than the loss of prospective fishing rights. Further, if the coastal State has weak enforcement capability, by denying permits it may just be forcing unlicensed fishing to take place.

Permit sanctions, either complete withdrawal or reductions in effort allocations, can be extended to cover a national fleet for the repeated transgressions of its composite members. This is a harsh measure but can shift responsibility to the fleet to control its members. Of course, it is not always possible for a flag State, or fleet association, to control the actions of its members. Thus fleet-wide sanctions could be requiring the impossible and thus backfire resulting in wholesale non-compliance rather than individual non-compliance. A wise approach is to advise the flag State in question and request that in a given period of time it takes measures to control its citizens or, after having been notified and given this opportunity, fleet-wide permit sanctions may result.

Along the lines of fleet-wide permit sanctions and reducing effort allocations, several more developed coastal States rely heavily on the threat of reducing portions or all of national catch allocations to achieve compliance by individual vessels. Indeed, one State not only staggers allocations throughout the year, the release of each successive allotment being subject to a record of satisfactory compliance with that State's needs, but it also additionally withholds a portion of that which it allocates as a sort of bond also to ensure compliance; if compliance is satisfactory then all of that which was allocated is released. While that approach may encourage compliance it also encourages under reporting of catch. In particular, a fisherman, as a businessman with creditors, must have a fairly certain idea of what catch he may produce if he is to continue in business. Fishing is an uncertain business at best, and if a State's management increases that risk to an unacceptable economic level, the fisherman is compelled to circumvent the management requirements in order to survive economically.

As already mentioned, a coastal State may take legal action against an offending vessel that was never arrested by proceedings via a local legal agent. However, that process does not by itself guarantee a remedy where the vessel is physically beyond the reach of the courts. If a bond has been posted or the flag State or some organization has assumed a guarantor's responsibility, a means for satisfying the fine may exist. In the absence of a satisfactory guarantee, the coastal State can use its leverage against the entire fleet by way of effort reductions, port closures, quota reductions and so on to compel an accounting by the individual offender and satisfaction of the judgement.

Some small coastal States are implementing compliance related measures in a concerted action on a regional basis to achieve greater authority vis-a-vis foreign fishing. One aspect of this regional approach is to require, as a pre-condition to licensing, that the prospective licensee appear on a register. The register would not only contain all the information normally required in individual applications, thereby facilitating the process and diminishing the costs of supplying such information on an individual coastal State basis, but also would contain compliance-related information collected on a region-wide basis for each vessel. Thus, each prospective licensing State would have such information at its disposal in general, and most importantly, when considering each applicant for a licence. The implications of publishing the indiscretions of one vessel throughout a region encompassing important fisheries may be enough to ensure that the vessel, and/or its underlying financial backers, take appropriate steps to settle any outstanding allegations of improprieties. Further, subject to certain and necessary procedural safeguards, serious or repeat offenders might not be entitled to remain on the register, thus barring them from licences throughout the region.

With respect to all fleet-wide sanctions as well as, or in combination with, region-wide sanctions, the foreign fishing interests have reason to be concerned that such procedures are not abused or arbitrarily triggered by unproven allegations or for fairly minor violations. However, fleet-wide sanctions and a regional registration process can be constructively and judiciously employed by coastal States to compel an accounting of the matter in dispute. This is particularly valuable for coastal States that lack the means physically to control foreign fishing, i.e., seize violating vessels. The need to detect and establish violations of course remains, but the effect of such enforcement action may be considerably enhanced by the leverage of fleet-wide and/or region-wide sanctions.

CONCLUSION

Compliance with fisheries regimes is inseparable from the substance of the regime, i.e., access conditions. Some conditions are clearly cost-effective aids to compliance; others, depending on the nature of the fishery and capacity of the coastal State, not only do not aid or are not cost-effective, but are counter-productive in terms of achieving compliance.

The following recommendations suggest, in general terms, principles that should aid in compliance with access conditions.

1. Reasonableness, Agreement and Flag-State Control

For many coastal States, the option of comprehensive, direct enforcement of fishery laws simply is not feasible. Therefore, compliance control must include a large degree of self-regulation and flag State control which, in turn, mandates the need to reach agreement or at least understanding between the two parties regarding access conditions. Unless that which is going to be required of foreign

fishermen takes into consideration as much as possible their legitimate needs and interests and is otherwise reasonable, their collaboration in complying will be minimal. Flag-State collaboration and control is essential to achieve compliance. However, that which is agreed to is generally the product of compromise; thus certain essential conditions must be unilaterally prescribed if they are not to be diluted.

2. Utility

A coastal State should not require conditions that are not of demonstrable utility to its current management needs. Can the information required be meaningfully digested and put to use? Does the access condition serve a real and immediate need? Frequently, the fisheries legislation addresses this need by providing that the authorities may, rather than shall, require a particular condition - this allows the coastal State to expand its regime as the needs arise without placing it into a compliance dilemma with the foreign fishing vessel.

3. Credibility

It is not difficult to draft extensive fisheries legislation and regulations patterned after a developed, sophisticated coastal State's model. However, to prescribe requirements on paper and to possess the ability to ensure that these requirements are fulfilled are two very different matters. In the absence of enforcement, law remains merely paper; enforcement is the "crucible of law, the test of its reality" (W. Michael Reisman, "Sanctions and Enforcement", in Cyril E. Black and Richard A. Falk, Eds, The Future of the International Order: Conflict Management, Vol.3. Princiton, N.J., Princeton University Press, 1971, p.275). If foreign fishing interests perceive that enforcement of a complicated, elaborate regime is sporadic and characterized by exceptions to the rule - by necessity or otherwise - compliance, and thereby the regime, will deteriorate at the expense of credibility. If the costs of complying exceed the costs, or risks, of not complying, the choice for fishermen, who tend to be bold and risk-taking in any event, is clear. Therefore, the maxim should be: do not require that which you cannot be fairly assured will be obeyed, or at least which can be verified, whether by direct enforcement and/or collaboration by the foreign fishery interest. Certain conditions are more capable of verification than others. It is better to have full compliance with a modest regime than partial, or no, compliance with a sophisticated access system.

4. Cost effectiveness

Not infrequently, a coastal State may find itself spending more on management and enforcement of a fisheries regime than it receives in benefits from its efforts. Previously, the coastal State had no jurisdiction over these resources, now in exercising that jurisdiction it must ask itself: Has its exercise of jurisdiction resulted in net benefits for the nation as a whole - or not? Further, each access condition that imposes a cost on foreign fishing, one way or another, in theory, reduces the net benefits available generally from the fishery and the net revenue perhaps otherwise available to the coastal State. Both coastal State and distant water fishing interests have a common interest in maximizing the net benefits available from a fishery through minimizing the costs of administration and implementation of access conditions.

5. Regional approach and harmonization

Where possible, States that are involved with similar or common fisheries should seek to harmonize the process and substance of access conditions. This is not only cost effective and enhances their leverage in exacting compliance but also is of benefit to foreign fishing. If violations of conditions may lead to region-wide implications, greater efforts by foreign fishing to comply can be expected. If conditions are standardized throughout a region the process of compliance by foreign fishing will be greatly facilitated, and cost reduced, from their perspective as well. For instance, requirements regarding markings, reporting, log books, local representatives and so on, should be standardized to the extent practicable.

6. Sanctions

Provided the coastal State can verify compliance or, more importantly, non-compliance, emphasis should be placed on region-wide and/or fleet-wide or sanctions to compel an accounting for the transgression in question. Further, proceedings in absentia coupled with bonds or similar guarantees of performance should be employed. Exclusive reliance on physical surveillance and, especially, physical arrests and seizures of vessels should be avoided, albeit such actions are occasionally required to maintain credibility.

ANNEX 14

JAPANESE EXPERIENCE IN ACCESS CONDITIONS OF 200 MILE REGIME

by

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1. IMPACT OF 200 MILE REGIME ON JAPANESE FISHING INDUSTRIES

Japan had made continuous progress in its fisheries yield since 1945 and attained an epoch making catch over 10 million metric tons in 1972. This was an outstanding achievement in comparing with only 1.3 million metric tons catch in 1945. The production, however, has become stagnant thereafter for various reasons. The catch composition, on the other hand, has been changed conspicuously after 1972, namely increased catch in both coastal and offshore waters and decreased catch in distant waters as shown in Table 1 below.

Table 1
Yield of Japanese Fishing Industries after 1970
(Unit:1000 metric tons)

Year	Total Catch	Marine Catch					
		Sub-Total	Distant	Offshore	Coastal	Culture	Others
1970	9,315	9,147	3,429	3,279	1,889	549	168
1971	9,909	9,758	3,674	3,541	1,934	609	151
1972	10,123	10,048	3,905	3,594	1,902	648	165
1973	10,763	10,584	3,988	3,984	1,820	791	179
1974	10,808	10,627	3,698	4,178	1,874	880	179
1975	10,545	10,346	3,168	4,469	1,935	773	199
1976	10,656	10,455	2,949	4,656	2,000	850	201
1977	10,757	10,549	2,657	4,924	2,107	861	208
1978	10,828	10,600	2,134	5,559	1,990	917	228
1979	10,590	10,359	2,035	5,488	1,953	883	231
1980	11,122	10,901	2,121	5,751	2,037	922	221
1981	11,336	11,120	2,042	5,916	2,207	955	216

It is obvious that the decrease of the catch in the distant waters started before introduction of the 200 mile regime by majority of the coastal States in 1977.

The fall of the distant water fisheries of Japan is attributed to several factors such as: (i) increased operation costs due to the fuel oil price hike; (ii) increased prices of fishing materials; (iii) increased wage of crew; (iv) application of the concept of the Law of the Sea before proclamation of the 220 mile regime.

In fact, in 1955 approximately 80% of animal protein intake of Japanese people was from fisheries products, but the percentage has decreased down to 45% in 1980. This means that the increase of animal protein intake of Japanese people in the past quarter century has been dependent on meat and dairy products, as shown in Table 2 below.

Table 2
Change of food habit of Japanese people

Year	Total animal protein (unit:g)	Fisheries Products				Dairy Products				Others
		Total	Fresh frozen	Salted smoked	Canned	Total	Meat	Eggs	Milk	
1955	16.9	13.0	-	-	-	3.4	1.1	1.3	1.0	0.5
1960	21.2	14.6	-	-	-	5.6	1.7	2.2	1.7	1.0
1965	26.9	15.1	5.9	8.9	0.3	10.5	3.5	4.0	3.0	1.3
1970	31.8	15.8	5.6	10.0	0.2	15.2	6.0	5.2	4.0	0.8
1975	36.6	17.5	6.8	10.3	0.4	17.6	8.5	4.9	4.2	0.6
1980	39.1	17.7	7.0	10.1	0.6	21.2	11.2	5.1	4.9	0.2

This trend has been accelerated as the costs of operation of fishing vessels has increased due to the fuel oil crisis and fishing industries have been obliged to raise the price of fisheries products to make both ends meet in their fishing operation, if it were all possible.

It was unfortunate that the 200 mile regime started under serious economic crisis caused by repeated increases of fuel oil price and when the fishing industries lost capability to cope with the additional expenditures of the new regime. The coastal States have gradually realized the difficulties encountered by the distant water fishing nations and found that they can not expect so much from the access fees. The situation has inevitably led the coastal States to shift their efforts from imposing large sum of access fees to plan participation to fishing operation by themselves.

The situation, in turn, resulted in change of Japanese fisheries policy, and more efforts are being placed nowadays to exploit its own 200 mile waters as well as the public seas. This policy has so far been successful and the catch lost in the distant waters have been replaced by the increased catch in the coastal and offshore waters as already shown in Table 1.

2. NATURE OF ACCESS FEE AND THE SYSTEM OF PAYMENT

(a) Nature of access fee

There have been several different concepts on the nature of the access fee. Some consider that the access fee is payment against the expectation of possible catch in the waters to operate and therefore it s ould not necessarily be related to the actual amount of catch achieved in the waters, but rather should be related to the amount of resources available in the waters. The others consider that it should be a payment to the amount of catch obtained in the waters and therefore if the actual catch is different from the assumed amount then the balance should be squared when the fishing operation is completed. Some others take position that the access fee is compensation against the expenditures of the coastal States for administration and surveillance of the fishing operation of the vessels of the distant water nations.

Whatever concept is applied, a simple fact is that if the amount of the fee is beyond the capability of payment of the distant water nations, it prohibits the fishing operation.

Another point which calls attention is the fact that, at the beginning of the new regime, nations concerned paid more attention to Article 62 of the Law of the Sea and placed importance on the optimum utilization of the resources and prevention of socio-economic dislocation of neighbouring nations as well as nations traditionally operating in the waters due to the new regime. This basic concept has gradually been replaced by the right of the discretion of the coatal States over their 200 mile zones. Whatever concept is applied to the nature of the access fee, it should be remembered that the fisheries resources are living resources which can be recovered if optimum utilization is designed, and both the coastal States and distant water nations should pay every effort to make the best use of the resources so that they can not be wasted.

(b) Lump sum fee versus per vessel fee

The access fee is normally imposed in the form of lump sum fee or per vessel fee, and both the lump sum fee and the per vessel fee have advantages and disadvantages.

Advantages of lump sum fee are: (i) payment of the fee is made in one lot or two lots during the agreement period and therefore both the payer and payee are free from the burden of complicated administration which otherwise is required to collect the money frequently from the fishermen; (ii) the recipient nation can have firm idea on the total amount of revenue in advance and therefore they can plan the best use of the income.

Disadvantages of the lump sum fee are: (i) somebody in the paying nation must take responsibility to collect money from individual fishermen and therefore a well established organization is required in the paying nation covering the participating fishermen; (ii) the lump sum fee level never correctly corresponds to the value of fish actually caught and complaint arises either from the payer or from the payee, and this is especially true in case of highly migratory fish; (iii) the system requires collection of equal amount of share from all participating fishermen but the catch of individual fishermen will be all different and therefore fishermen can not help feeling that they are paying opportunity costs; (iv) opportunity costs can be paid so far as the amount of the share is reasonable, but if the fee level is raised, fishermen who rely upon other fishing grounds and expect less opportunity of fishing in those specific waters, then others will drop out from the system and the amount of share of the remaining fishermen will further increase and finally the organization will loose its capability of collecting the lump sum. The lump sum system actually has often led the access negotiation to the unfortunate break-off.

It has been proven through experience that a per vessel fee, more specifically a per-vessel per-trip fee coupled with machinery to adjust the fee level automatically based on the change of fish prices, is the fairest and accordingly most stable system of payment of the access fee, although it requires more sophisticated administration.

3. ACCESS CONDITIONS

(a) Prohibited waters, prohibited fishing seasons, prohibited fishing methods and prohibited species

Prohibited waters are normally established where conflicts exist between the local fishermen and distant water fishermen, or where protection is required for the resources due to, for example, existence of spawning areas or fish aggregating devices. In some countries, the prohibited waters are arranged for environment protection.

Prohibited fishing season is designed mainly for protection of resources during the spawning season, and in some cases for the purpose to avoid seasonal conflict of fishing operation between the coastal State fishermen and distant water fishermen.

A specific fishing method may be prohibited when such method is too efficient and introduction of such method may cause destruction of the resources or economic dislocation of traditionally operating fishermen in such waters.

Prohibition of catch of certain species has been applied either to protect species which otherwise may be destroyed or to protect interest of specific industries such as sports fishing. It is, however, often technically difficult to catch certain fish species selectively.

Prohibitions on specific waters, seasons, fishing methods, species imposed as conditions for access have sometimes caused dispute between the coastal State and the distant water nation, mainly due to the difference of view concerning the abundance of resources, evaluation of the environment and specific interest of specific people, and the conflict of the view should be solved through more careful research of the resources as well as improvement of mutual understanding on different customs in different societies.

(b) Keeping licence on board

To keep a fishing licence on board is a basic condition for access as it is beneficial for both the coastal State and the distant water nation to avoid unnecessary confusion.

In some cases, it is technically not possible to follow this condition as fishing vessels could be on the sea when the licences are issued, and there is no means to deliver the licences to those vessels. If a licence is for a long period, such as one year, it can eventually be delivered to the vessel when the vessel returns from the voyage or when the vessel enters into a port abroad for refuelling, provisioning or landing the catch. It is, however, not possible if the licence is for a short period, for example, per trip, and in such a case the licence number will be informed to the vessel by means of telecommunication so that it can be produced against inspection, as evidence to comply the condition of access.

(c) Reporting

Several different types of reporting have been imposed to vessels of the distant water nation operating within the 200 mile waters of coastal nations, such as: (i) report of entry and departure to and from the 200 mile waters; (ii) catch report on arrival to the landing sites; (iii) periodical catch report during the fishing operation within the 200 mile waters; (iv) report on commencement and completion of fishing operation within the 200 mile waters; (v) report on change of fishing location within the 200 mile waters; (vi) report for non-operation, if a vessel has obtained a licence and not operated at all within the 200 mile waters during the licensed period.

These reportings are designed for several different purposes such as: (i) collection of data for resources management; (ii) gathering information to determine reasonable fee level; and (iii) to keep track of the movement of fishing vessels to facilitate surveillance. Reportings are essential for eventual improvement of resources management. It should, however, be realised that if too many reportings are imposed beyond the capability of fishermen on board small vessels, the accuracy of the reports may inevitably be lowered and therefore hamper the original intention. The simpler the better is especially true to deal with fishermen who should work under severe conditions which are entirely different from those for the workers on land. In this connection, it is advisable to limit the reportings to most important and useful ones such as the catch report on return to the landing site and entry and departure report.

To facilitate efficient reporting, it is vitally important to have telecommunication facilities. In fact, however, it is often the case that developing nations are not equipped with necessary facilities such as radio stations and telex stations. Japanese telecommunication facilities are well developed and approximately 650 land stations are exclusively used for radio communication with Japanese fishing vessels.

Difficulties of Japanese fishing vessels are: (i) direct international radio communication is allowed only if the vessel is manned with a radio operator who has a licence for international telecommunication, but (ii) such high class operators are not on board small fishing vessels and therefore the reports from the fishing vessels must first be addressed to the land stations in Japan and be relayed to the coastal States. This causes inevitable delay of the communication and costs money if telex facilities are not available in the coastal States.

Another problem involved in the reportings is the formats of the reports, which have been different from country to country due to different demands of coastal States. As well understood, even minor difference of the formats requires additional efforts when correct reporting is intended. This is especially true for fishermen who operate within 200 mile waters of several different coastal States during one fishing trip, as often are the cases of fishing of highly migratory fish. The idea of the Nauru Agreement countries to use a single format among them seems to be beneficial for both distant water nations and coastal nations.

(d) Keeping up-to-date catch records on board

Before the 200 mile regime, it had been common practice among fishermen to keep catch records on private notebooks of skippers, and such records were considered as the properties of the skippers. It was, therefore, considerably difficult when attempt was made to have them write their catch records in such a way as everyone could understand. It has, however, been gradually accepted to

use fixed formats for record keeping and nowadays many fishermen follow the new system. The situation will be further improved when old fishermen who have relied upon the genius instinct for detection of good fishing grounds are replaced with younger generations who have full command on all the modern fish detecting devices.

(e) Restrictions on amount of catch, number of fishing vessels, transhipment of catch and rotation of crew

The restrictions on the total amount of the catch, the total number of vessels to operate, transhipment of the catch and rotation of the crew which have been imposed by some coastal States are all designed to control the size of the fishing efforts.

If there is any justifiable reason to restrict the fishing efforts, the logical sequence is to impose restriction on the amount of the catch. It is, however, often impracticable to establish complete surveillance system therefore. In theory, it may be possible to design a perfect system of surveillance, but expenditure involved in such a system may totally discourage commercial operation of fishing vessels.

Although it is an indirect approach, a more practical and practicable way is to limit the total number of fishing vessels to operate in the waters. The restriction of the total number of fishing vessels has also been applied for the purpose of establishing a ceiling on the amount of catch in case of a lump sum payment, so that a balance can be maintained between the amount of the lump sum and the amount of catch for the benefit of the coastal States. The restriction on the amount of the catch and the number of vessels has not much meaning for operation of fishing vessels catching highly migratory fish under per vessel system of payment of the access fee.

(f) Boarding of Observers

Boarding of observers has two purposes, namely: surveillance, and scientific or practical study of fishing operation.

The practical problem involved in boarding of observers is how an observer can be placed on board a fishing vessel and how he can be collected after finishing his duties. If a vessel was required to enter a port to pick up and release the observer, it will cause loss of many fishing days and in case of skipjack pole-and-line boats such entry to a port may result in death of the live bait fish due to the change of water temperature in the bait tanks, thus making the operation not commercially feasible.

In practice, observers of developed nations where they have their own means of transportation may be placed and collected on the sea by high speed surveillance vessels, but in the case of countries where such means of transportation are not available, observers are placed on the ports of departure and released in the ports of landing of the catch, and the nature of observation is surveillance in the former cases and studies in the latter cases.

(g) Vessel identification mark

Through a few years of experience, it has been accepted by both the coastal States and distant water nations to paint the radio call sign or the signal letters if radio call sign is not available, and the system is working satisfactorily. The only technical difficulty is the fact that there is no space on the hull above the water surface to paint large letters of one metre high for small fishing vessels, and the Japanese fishing vessel registration mark is used for identification of the vessel.

(h) Radio equipment

Some coastal States impose obligation of installation of radio equipment with a specific frequency allocated to that country, so that they can communicate to the vessel when required. The radio frequencies are internationally allocated and therefore Japanese fishing vessels are equipped with radio with those frequencies allocated to Japanese fishing vessels together with internationally allocated emergency frequencies. Additional frequencies means, therefore, installation of additional equipment and additional watch to the required frequencies, and such additional watch is in some cases technically difficult as already established watching schedule is normally quite tight.

Another difficulty concerning the radio equipment is the fact that the radio on board can be operated only by a licenced operator, and therefore it is not allowed for the observers or inspectors of the coastal State to use the radio. The message of such officials may be transmitted by the licenced operator on board, but the contents of the message are restricted by the relevant laws and regulations of Japan.

(i) Summary

The Appendix attached is a numerical analysis concerning access conditions that tells itself in a very simple way which access conditions are more useful, practicable, and commonly applied than others.

4. TECHNO-ECONOMIC COOPERATION

Techno-economic cooperation is often requested by the coastal States in conjunction with the access for Japanese fishing vessels to the 200 mile waters of the coastal States, such as training of local people, services of Japanese experts, partial landing of the catch on local sites, and establishment of joint ventures.

The basic concept of most of the coastal States in providing access for the distant water nations is: (i) to place the first priority to the fishing operation of their own nations, if it is at all possible; (ii) to place the second priority to some forms of joint operation, such as partial landing of the catch of the fishing vessels of the distant water nations; and (iii) to place the last priority to the access for distant water nations.

This concept is justified as they try to make best use of the resources for the benefit of their own nations. Unfortunately, many coastal nations are not yet prepared to expand their own fishing operation and they have not enough knowledge even to make partial participation by means of processing of partially landed catch or by means of joint venture operation.

Being one of the most developed fishing nations, Japan has been providing various sorts of techno-economic cooperation for many years even before commencement of the 200 mile regime, jointly by the government and industries. Many trainees are accepted in the field of fisheries every year and expert services are provided, and Japan has established well organized machinery to cope with the request of technical assistance as well as economic cooperation.

An important point of Japanese cooperation is that any cooperation of commercial nature is outside of the government intervention, and it must be made by industries at their own expenses. An example of this sort of economic cooperation is the joint venture in fisheries. The joint venture operation in fisheries is nothing new, and at the moment 184 joint ventures are operating all over the world as shown in Table 3 below.

Table 3
Fisheries joint ventures as of 1982

Areas	Trawl fishing	Tuna and skipjack fishing	Other fishing	Fish culture	Cold store	Proces-sing	Total
Central & South America	13	2	3	1	3	2	24
Asia & Oceania	21	6	19	31	10	15	102
Africa	7	2	-	-	4	-	13
Europe	1	-	-	-	-	-	1
North America	-	-	5	1	-	38	44
Total:	42	10	27	33	17	55	184

It is often questioned how fisheries joint ventures can be established. The answer is rather simple, namely, joint venture will be welcome if it assures profitable operation. In fact, however, most joint ventures have not been profitable operations due to: (i) the risky nature of fishing operation in general; (ii) unstable political climate of the recipient country; (iii) economic instability of the recipient country; (iv) social insecurity of the recipient country; (v) unrealistic technical standard imposed on vessel design.

The joint venture operation is not a matter which can be forced as a condition of the access, but it should be determined based on commercial judgement of the fishermen concerned.

5. OBLIGATION OF COASTAL STATES

The most serious concern of the distant water nations in the case of violation of the 200 mile regime are: (i) the vessels seized and crews arrested are promptly released; (ii) crews are not imprisoned; and (iii) prompt notification is given to the flag States of the action taken by the coastal States, in accordance with Article 73 of the Law of the Sea. The delay of the notification and lack of preciseness of information have often caused confusion among people concerned, which otherwise could have been avoided.

APPENDIX

Analysis of Access Conditions
(Case applied/Total arrangements)

Access Conditions	Target Fish	
	Highly migratory fish	Other pelagic fish and demersal fish
1. Type of arrangement:		
Government/Government	10/16	10/10
Government/Industries	3/16	0/10
Unilateral	3/16	0/10
2. Access fee:		
Lump-sum	7/16	2/10
Per-vessel	9/16	3/10
No-fee	-	5/10
3. a. Prohibited waters	11/16	10/10
Prohibited fishing seasons	2/16	5/10
Prohibited fishing methods	7/16	-
b. Keeping licence on board	15/16	9/10
c. Reportings:		
Entry and departure	9/16	6/10
Catch report:		
On arrival to the landing sites	12/16	2/10
During the fishing operation	6/16	6/10
Commencement and completion of fishing operation	1/16	2/10
Change of fishing location	2/16	0/10
Non-operation	2/16	0/10
d. Keeping catch records on board	15/16	8/10
e. Restrictions on fishing effort:		
Amount of catch	5/16	9/10
Number of vessels	8/16	6/10
Transshipment of catch	10/16	3/10
Rotation of crew	1/16	0/10
f. Boarding of observer	12/16	5/10
g. Vessel identification mark	8/16	10/10
h. Radio equipment	1/16	4/10

ANNEX 15

COMPETENCES OF THE EUROPEAN ECONOMIC COMMUNITY IN THE FIELD OF FISHERIES

by

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1. MEMBERS AND CONSTITUTIVE INSTRUMENTS OF THE EUROPEAN ECONOMIC COMMUNITY

Since 1 January 1981, ten European States are members of the European Economic Community: Belgium, Denmark, France, the Federal Republic of Germany, Greece, Italy, Luxembourg, the Netherlands, and the United Kingdom.

The treaty establishing the European Economic Community (EEC) was signed in Rome on 25 March 1957 by the original six founding States. After ratification by the signatory States, the treaty entered into force on 1 January 1958 1/.

Under the treaty signed at Brussels on 22 January 1972, Denmark, Ireland and the United Kingdom acceded to the treaty of Rome and became EEC members as from 1 January 1973. Greece became by 1 January 1981 the tenth member of the EEC under the treaty of accession signed in Athens on 28 May 1979. Accession negotiations between the Community and Portugal and Spain have been initiated with a view to their accession to the Community.

2. AREAS AND MODALITIES OF COMPETENCE OF THE EUROPEAN ECONOMIC COMMUNITY

According to Article 2 of the EEC treaty: "The Community shall have as its task, by establishing a common market and progressively approximating the economic policies of member States, to promote throughout the Community a harmonious development of economic activities, a continuous and balanced expansion, an increase in stability, an accelerated raising of the standard of living and closer relations between the States belonging to it".

Community action for the attainment of these objectives comprises:

- The creation of a **custom union** covering all trade in goods and involving the prohibition between member States of customs duties on imports and exports and all charges having equivalent effect. The adoption of a **common customs tariff** in relation with third countries and the establishment of a **common commercial policy** towards third countries.
- The establishment of a common policy within the sphere of **agriculture**, including **fisheries.**
- The abolition, as between member States, of obstacles to the **freedom of movement** for persons, services and capital.
- The adoption of a common policy in the sphere of **transport.**
- The institution of a system ensuring that **competition** in the common market is not distorted.

1/ The treaty establishing the EEC was registered with the United Nations Secretariat on 24 April 1958 (United Nations Treaty Series, Vol. 294, No. 4300)

- The coordination of the **economic policies** of its member States, including i.a. common action within the framework of international organizations of an economic character in matters which are of particular interest to the common market.
- The **approximation of legislation** in member States, to the extent required for the establishment or functioning of the common market.

The list of actions entrusted to the EEC is not exhaustive. The process of integration in which the member States are engaged is of an evolutionary character and can extend to new spheres of activity when such extension should prove necessary to attain one of the objectives of the Community. To specify in detail the matters over which competence might develop is difficult due to the general terms used in this respect in the treaty instituting the Community. As example, could be mentioned the adoption by the Community of an **environmental policy.**

All measures decided by the competent institutions of the Community are published in its Official Journal (O.J.), which secures their legal validity on the internal as well as on the external level.

3. INSTITUTIONS

The achievement of the tasks given by the treaty to the Community is assured by the latter's institutions, which comprise:

- An **Assembly:** the European Parliament, whose members since June 1979 are elected by direct universal elections.
- A **Council:** made up of representatives of the governments of member States.
- A **Commission:** consisting of members nominated by the governments of member States but independent of these in the exercise of their functions.
- A **Court of Justice:** consisting of judges nominated by the governments of member States, whose task it is to ensure the respect of law in the interpretation and implementation of the treaty.

In exercising the powers attributed to them, the institutions of the European Community act by virtue of a transfer of competence agreed to by its member States in the framework of the treaty of Rome, and they have competence to take, in various forms (regulations, directives, decisions) actions which are binding on member States. In the case in particular of regulations, these are directly applicable in the respective legal orders of member States without any intervention on the part of member States.

3.1 Treaty making power

In different fields, the Community has power to negotiate and conclude bilateral or multilateral agreements with third countries or international organizations.

The Community has the competence, exclusive of its member States, to negotiate and conclude agreements with third States in domaines where the Community has, on the internal plane, adopted uniform rules for the application of its common policies.

4. COMMUNITY COMPETENCE ON FISHERIES MATTERS

4.1 Conservation and utilization of marine living resources

Community control over fisheries is derived from explicit mention in the Treaty itself 2/, as enacted by the Council of Ministers through regulations in 1970 3/. They were consolidated in 1976 4/,

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2/ Article 38 - para.1, and Articles 39-46, read in conjunction with Annex II which brings fisheries within the overall common agricultural policy

3/ O.J. 1970 L 236/1 and 5 - Council Regulations 2141 and 2142/70/EEC

4/ O.J. 1976 L 20/1 and 19 - Council Regulations 100 and 101/76/EEC

with derogations provided for by the Treaty of Accession in respect of Denmark, Ireland and the United Kingdom. Regulation 2141/70/EEC, established a common structural policy for the fishing industry and in particular aimed to ensure equal access to the fishing grounds of each member State "coming under its sovereignty or within its jurisdiction". 5/

By a resolution adopted on 3 November 1976, the Council of the European Communities agreed that the member States, by a concerted action, would extend, from 1 January 1977, the limits of their fishing zones to 200 miles from their coasts bordering on the North Sea and the North Atlantic.

The Court of Justice of the European Communities relying on the pertinent provisions of the Treaty (Article 38 et seq.), on the provisions of the Act concerning the conditions of accession to the Community of Denmark, Ireland and the United Kingdom (Article 102) and on the basic regulations adopted by the Community concerning fishing (Regulation Nos. 100 and 101/76 of 19 January 1976), recognized that the Community was competent to take conservation measures for the biological resources in all areas of the sea in an autonomous manner as well as by contractual undertakings with third countries or within the framework of international organizations, and it made it clear that this competence, once exercised, was exclusive of all diverging provisions of the member States. 6/

A Common Fisheries Policy (CFP) has been established by the regulations and other decisions made by the Council on 25 January 1983.

In order to ensure the protection of fishing grounds, the conservation of the biological resources of the sea and their balanced exploitation on a lasting basis and in appropriate economic and social conditions, a Community system for the conservation and management of fishery resources has been established by Regulation 170/83. 7/

(a) The access regime to the coastal band of 12 miles, applicable until 31 December 1992 and renewable for a further period of 10 years, is based on the maintenance of the derogation regime defined in Article 100 of the 1972 Act of Accession and on the generalization up to 12 miles of the limit of six miles laid down in that Article. It also specifies for each member State the nature and the importance of the rights which they may enjoy in the coastal waters of the other member States. Furthermore, the access regime contains provisions for the establishment of a sensitive area around the Shetland Islands.

(b) In accordance with Article 2 of Regulation 170/83 conservation measures have to be formulated in the lights of the available scientific advice, and in particular of the report prepared by the Scientific and Technical Committee for Fisheries.

Such conservation measures include technical measures and the limitations of catches by establishing a total allowable catch (TAC) for each stock, shares available to the Community, taking into account arrangements with third countries, and the distribution of these Community shares between the member States (quotas) in a manner which assures each member State relative stability of fishing activities.

Member States are authorized to determine, in accordance with the applicable Community provisions, detailed rules for the utilization of the quotas allocated to them.

5/ Article 2 of Regulation 2141/70 and restated in Article 2 of Regulation 101/76

6/ Court rulings of 14.7.1976, Cases 3, 4 and 6/76, European Court Record (E/C/R/) 1976, p.1279, and case 61/77, E/C/R/ 1978, p.413

7/ O.J. 1983 L 24/1

(c) Technical measures for the conservation of fishery resources in Community waters, except the Baltic Sea and the Mediterranean Sea, specifying inter alia the mesh, size by-catch rates and fish size permitted as well as the limitation of fishing within certain areas and periods and with certain gear are laid down in Regulation No. 171/83. 8/ Additional national measures of a strictly local character may be maintained or taken subject to examination by the Commission of their compatibility with Community law and conformity with the common fisheries policy.

(d) In conformity with Article 10 of Regulation 170/83, Regulation 2057/82, which became applicable on 1 January 1983, lays down rules for the control of catches in order to ensure that the quotas fixed are observed. The inspection is basically carried out by member States' authorities. However, the Commission of the European Communities may verify on the spot the implementation of this Regulation.

4.2 Relations with third countries

(a) Bilateral fisheries relations

In its Resolution of 3 November 1976, the Council of the European Communities also decided that, from 1 January 1977, the exploitation by fishing boats from third countries of resources located in the fishing zones of the member States extended to 200 miles would be regulated by agreements between the Community and interested third countries and that the acquisition of rights for Community fishermen in the waters of third countries, as well as the maintenance of existing rights, would be ensured by such agreements.

In conformity with these decisions, fisheries agreements have been concluded with third countries on the basis of the following principles:

(a) The allocation of surpluses (Article 62 of the Draft Law of the Sea Convention): By the agreement concluded on 3 June 1977, the USA allowed access for Community vessels to harvest an allocation of that portion of the total allowable catch (TAC) for a specific fishery that will not be harvested by United States fishing vessels.

(b) Reciprocity: The agreements concluded with Norway, Sweden, Faroe Islands and Spain are based on the principle of reciprocal access to resources. Recently some third countries have developed a new approach which is not derived from the agreed text of the Law of the Sea Convention, and which is aiming at agreements involving import concessions in return for fishing rights. This approach may create difficulties for international trade. The Community had to accept an agreement with Canada based on this principle of access to resources/access to markets.

(c) Financial contributions: The agreements concluded with Senegal, Guinea-Bissau and Guinea provide the obligation that in return for the fishing opportunities accorded under these agreements the Community shall pay compensation.

At present, access by vessels from third countries (Norway, Sweden, Faroe Islands and Spain) to Community waters is only granted on the basis of reciprocal access by vessels from member States of the Community to the third country's waters concerned. No fees, even not administrative fees, are charged for access to Community waters.

The licensing arrangements with those third countries are fixed directly in the framework of the yearly quota consultations.

8/ O.J. 1983 L 24/14

These arrangements fix the provisions concerning:

- The number of licences for each quota or group of quotas on the basis of statistical and technical aspects (types of vessels, average daily catch rates, ...)
- The application procedure
- The obligations of the captains of the vessels (catch-reports, logbook requirements, ...)
- Penalty clauses (withdrawal or refusal of licences)

The licences arrangements thus agreed are afterwards laid down in the regulation adopted by the Council of Ministers, authorizing fishing by third country vessels in Community waters. Simultaneously, with the issuing of licences by the Commission of the European Communities, the control authorities of the member States are informed for inspection reasons.

The allocation between the member States of quotas obtained by the Community in waters of third countries forms part of the overall quota allocation and reflects both traditional fisheries and actual experience in the fisheries in the waters concerned.

Compliance with Community regulations. Fishing by vessels from third countries in Community waters is authorized by a Regulation adopted by the Council. In the Community's legal system, a regulation is directly binding in each member State. This implies that a Community regulation has the same legal effects as a national law adopted by a member State. The authorities responsible in a member State for the enforcement of laws, including fisheries inspection services and the Courts, are therefore bound to enforce a Community regulation in the same manner as national law.

(b) Multilateral fisheries relations

In the abovementioned Council Resolution of 3 November 1976 the Council also decided that the Community should replace its member States as party to international fisheries conventions. In accordance with this decision the Community has become a Contracting Party to certain international conventions regulating fisheries on the high seas and has undertaken negotiations or conudcted exploratory conservations with a view to acceding to several other such conventions. The Community is a Contracting Party to the conventions establishing the North-West Atlantic Fisheries Organization (NAFO), the North-East Atlantic Fisheries Commission (NEAFC), the Convention for the Conservation of Antarctic Marine Living Resources and the Convention for the conservation of salmon in the North Atlantic Ocean. The Community is also on the point of becoming a Contracting Party to the Baltic Convention, ICCAT and ICSEAF.

In its capacity as a member of NAFO the Community has adopted Regulations submitting Community vessels fishing in areas which do not fall under the jurisdiction of any coastal State to conservation measures including a scheme of international enforcement.

ANNEX 16

EASTERN PACIFIC OCEAN TUNA FISHING AGREEMENT

The Contracting Parties to this Agreement:

Resolved to cooperate for the purpose of ensuring the conservation and rational utilization of tuna resources in the Eastern Pacific Ocean.

Bearing in mind that tuna cover a broad area which, in the Eastern Pacific Ocean, includes jurisdictional zones of a varying nature declared by the coastal States and a considerable portion of the seas in which coastal States do not exercise any jurisdiction.

Recognizing that a tuna conservation regime for the Eastern Pacific Ocean cannot be effective and equitable unless it is comprehensive and has the participation of all States that fish tuna in that region on a meaningful scale in relation to conservation requirements.

Convinced that it is essential to establish, pending conclusion of a comprehensive regional tuna conservation regime, an interim regime, taking into account the jurisdictional zones declared by many coastal States of the Eastern Pacific Ocean as well as the highly migratory character of tuna.

Have agreed as follows:

Article I

The Contracting Parties agree to establish an interim regime for the management of fishing activities of tuna vessels in the Eastern Pacific Ocean, based on a scheme for granting licences in the region, which guarantees rational exploitation of the resources and equitable access to the fishing areas.

Article II

For the purpose of this Agreement, the Contracting Parties agree that:

A - "Coastal States" means States bordering the area described in paragraph B of this Article.

B - The "Agreement Area" means the following:
From the point on the mainland where the parallel of 40°N latitude intersects the coast westward along the parallel of 40°N latitude to 40°N latitude by 125°W longitude, thence southerly along the meridian of 125°W longitude to 20°N latitude by 125°W longitude, then easterly along the parallel of 20°N latitude to 20°N latitude by 120°W longitude, thence southerly along the meridian of 120°W longitude to 5°N latitude by 120°W longitude, thence easterly along the parallel of 5°N latitude to 5°N latitude by 110°W longitude, thence southerly along the meridian of 110°W longitude to 10°S latitude by 110°W longitude, thence easterly along the parallel of 10°S latitude to 10°S latitude by 90°W longitude, thence southerly along the meridian of 90°W longitude to 30°S latitude by 90°W longitude, thence easterly along the parallel of 30°S latitude to the point on the mainland where the parallel intersects the coast, excluding the areas within 12 nautical miles of the baseline from which the breadth of territorial sea is measured and those areas within 200 nautical miles of the baselines of coastal States not signatories to this Agreement, measured from the same baseline. The Agreement area may be adjusted according to the provisions of Article III(B).

C - The species of tuna subject to this Agreement are: yellowfin tuna, Thunnus albacares (Bonnaterre, 1788); bigeye tuna, Thunnus obesus (Lowe, 1839); albacore tuna, Thunnus alalunga (Bonnaterre, 1788); northern bluefin tuna, Thunnus thynnus (Linnaeus, 1758); southern bluefin tuna, Thunnus maccoyii (Castelnau, 1872); skipjack tuna, Katsuwonus pelamis (Linnaeus, 1758); black skipjack, Euthynnus lineatus (Kishinouye, 1920); Kawakawa, Euthynnus affinis (Cantor, 1849); bullet tuna, Auxis rochei (Risso, 1810); frigate tuna, Auxis thazard (Lacepede, 1800); eastern Pacific bonito, Sarda chiliensis (Cuvier in Cuvier and Valenciennes, 1831); and Indo-Pacific bonito, Sarda orientalis (Temminck and Schlegal, 1844).

Article III

A - The Contracting Parties agree to establish a Council to implement this Agreement. The Council shall be composed of representatives of the Contracting Parties which are coastal States or are members of the Inter-American Tuna Commission (IATTC) at the time that this Agreement enters into force. Each such Contracting Party may appoint one representative and up to three alternative representatives to the Council, but each such Party shall have only one vote. All Council decisions shall be adopted by unanimous agreement of such Contracting Parties present when the vote is taken, provided that at least five such Contracting Parties are represented.

B - The Council shall have authority:

1. To issue licences in accordance with Article IV.
2. To appoint the national authority designated by any Contracting Party to issue licences in accordance with this Agreement.
3. To appoint a Director, and to provide the resources to pay for his services and those of any needed staff, by contract or other arrangements.
4. To approve the proposed budget which shall be submitted annually to the Council by the Director.
5. To authorize the Director to request and utilize the services and resources of any competent international agency or organization.
6. To establish licence fees within limits prescribed in the Protocol to this Agreement.
7. To disburse annually the revenue produced by the licence fees in accordance with the Protocol to this Agreement.
8. To request reports from any competent international agency or organization on the status of any stocks of tuna in the Agreement Area, and to take such reports into account to promote the establishment of a comprehensive regional tuna conservation regime comprised of all States that fish tuna in the Eastern Pacific Ocean on a meaningful scale in relation to conservation requirements.
9. To establish regulations for the effective implementation of this Agreement.
10. To adjust the boundaries of the Agreement Area, in accordance with recommendations by the Director.

C - When the Council decides, based on scientific data contained in a report of any competent international agency or organization, that there is urgent necessity to conserve tuna resources, the Contracting Parties shall enter into consultations among themselves, and with States that are not Contracting Parties and fish tuna in the Eastern Pacific Ocean on a meaningful scale in relation to conservation requirements.

D - In addition to actions taken in accordance with paragraph C, whenever the Contracting Parties include all States that fish tuna in the Eastern Pacific Ocean on a meaningful scale in relation to conservation requirements, pending conclusion of a comprehensive regional tuna conservation regime in which all such States participate, the Council may make interim conservation recommendations concerning tuna resources. Such recommendations shall be based on the reports referred to in paragraph B (8), and shall be consistent with and not supercede, the obligations of any Contracting Party pursuant to any relevant multilateral conservation agreement.

E - The Council shall meet ordinarily once a year, and extraordinarily at the request of the Director or representatives of two Contracting Parties.

F - The Director shall carry out duties set forth in this Agreement and as otherwise prescribed by the Council. The Director shall be responsible to the Council.

G - The Contracting Parties shall request their licensed vessels to cooperate with any competent international agency or organization to facilitate the collection of appropriate data.

H - Any authority not expressly provided to the Council is reserved to the Contracting Parties.

Article IV

A - The Contracting Parties agree to the issuance of licences permitting access to fishing in the Agreement Area. Licensing authority shall be vested in the Council.

B - The Contracting Parties agree that, in order to fish in the Agreement Area for any of the species of tuna designated in Article II, vessels flying their flags shall be required to have a valid licence, issued in accordance with this Agreement.

C - Licence fees shall be established according to the provisions of the Protocol to this Agreement.

D - The Council, through the Director or an appointed national authority, shall issue licences directly to owners or their representatives, of the flag vessels of the Contracting Parties in accordance with the Protocol to this Agreement.

Article V

Any Contracting Party may require only those vessels flying its own flag to utilize the services of its national authority appointed by the Council.

Article VI

A - The Contracting Parties agree not to prohibit the importation of tuna and tuna products from another Contracting Party, as a result of any enforcement action by that Contracting Party consistent with this Agreement, as long as such Party is acting in conformity with this Agreement.

B - Each Contracting Party shall adopt, as soon as possible, such provisions in its national law as may be necessary to ensure that its own flag vessels comply with the provisions of this Agreement and its Protocol.

Article VII

Contracting Parties to this Agreement may be:

A - Coastal States as defined in Article II

B - Member States of the IATTC

Article VIII

Any State not included in Article VII may become a Contracting Party by adhering to this Agreement after unanimous approval by the Council.

Article IX

This Agreement shall enter into force 30 days after the deposit of the fifth instrument of ratification or adherence by a coastal State.

In the case of any State that deposits its instrument of ratification or adherence after the Agreement has entered into force, this Agreement shall enter into force for such State 30 days after the date on which such State has deposited said instrument.

Article X

The instruments of ratification or adherence shall be deposited with the Government of Costa Rica, at the Ministry of Foreign Relations and Worship.

Article XI

If during any period after entry into force, there are fewer than five Contracting Parties that are coastal States, the provisions of this Agreement shall not apply for such remaining Contracting Parties during such period, but this Agreement shall not terminate.

Article XII

Any Contracting Party may, at any time after two years from the date on which this Agreement has entered into force for such Party, withdraw from this Agreement upon giving written notice to the Ministry of Foreign Relations and Worship of Costa Rica. If such notice is received by the Government of Costa Rica no later than 1 October of any year, it shall become effective on 31 December of that year. Any such notice received after 1 October of any year shall become effective on 31 December of the following year.

Article XIII

The provisions of this Agreement do not prejudice the positions of the Contracting Parties regarding internal waters, territorial seas, exclusive economic zones, fishery conservation zones, high seas, or sovereign rights or jurisdiction for any other purpose.

Article XIV

The Contracting Parties, recognizing the interim nature of this Agreement and the highly migratory character of the tuna resource, agree to continue their efforts to establish a new regional regime for the conservation, management, and orderly exploitation of tuna resources in the Eastern Pacific Ocean.

This regional regime shall include equitable guaranteed quotas to coastal States based upon, inter alia, the criterion of concentration of the tuna resource, the effective measurement of which shall be determined in the future agreement among participants in the tuna fishery in the area regulated by the IATTC.

Article XV

The Contracting Parties, in view of their mutual interest in the effective implementation of the measures provided by this Agreement, undertake to cooperate to the extent possible in their tuna fisheries relations in the Eastern Pacific Ocean, pending the issuance of licences pursuant to this Agreement.

Article XVI

This Agreement shall be open for signature from 14 March 1983, until such time as the depositary shall receive the instrument of ratification or adherence of a fifth coastal State.

In witness whereof, the undersigned plenipotentiaries, duly authorised by their respective governments, have signed this Agreement.

Done at San Jose, Costa Rica, on 14 March 1983, in two copies in the Spanish and English languages, both texts being equally authentic, and will remain with the depositary that will provide certified copies of both texts to all signatory States.

Protocol to the Eastern Pacific Ocean Tuna Fishing Agreement

A1- If the Agreement enters into force with five Contracting Parties, the fee for a fishing licence shall be US$60 (sixty dollars) per net registered ton of the vessel requesting the licence.

2- For each additional Contracting Party which is a coastal State, the Council shall adjust the licence fee up to a maximum of US$100 (one hundred dollars) per net registered ton. For this purpose, the Council shall take into account, inter alia, the amount of tuna taken within 200 nautical miles from the baselines from which the breadth of the territorial sea of the coastal State ratifying or adhering to this Agreement is measured.
The minimum increase in the fee for each additional coastal State ratifying or adhering, after the sixth, shall be US$10 (ten dollars) per net registered ton. The minimum increase for the sixth coastal State may be more than, or less than, US$10 (ten dollars) per net registered ton, also as determined by the Council.

3- Upon withdrawal by any coastal State, the licence fee shall be decreased, taking into account, inter alia, the amount of tuna taken within 200 nautical miles of the aforementioned baselines of the coastal State withdrawing from the Agreement. However, in no case shall the fee be less than US$60 (sixty dollars) per net registered ton.

B - Licences may be purchased at any time upon full payment of the established fee. Licences shall be valid until 31 December of each year and allow access to fishing in the Agreement area.

C - Any Contracting Party's vessel with a net registered tonnage of 200 tons or less may obtain licences on a semi-annual rather than on an annual basis. The fee for a semi-annual licence shall be one-half of the annual fee.

D - Licences shall not be required of vessels with a net registered tonnage of 200 tons or less which fish exclusively within 200 nautical miles of the aforementioned baselines of their flag State. However, the flag State shall notify the Director of the names, registrations, tonnages and catches of such vessels.

E - For the purpose of the Agreement and this Protocol, the term "tons" refers to short tons.

F - After deducting an appropriate percentage of the total fees collected for administrative costs, but in no case more than 10 percent of the annual total, the Council shall disburse annually the balance of all fees to the coastal States in proportion to the amount of tuna taken within 200 nautical miles of the aforementioned baselines during the year in which the licences are issued. For the purposes of such disbursement, the Council in accordance with paragraph G of this Protocol may request, in addition, data from any competent international agency or organization.

G1- All licensed vessels shall provide written reports on the size of the catches taken in the Agreement Area making specific mention of the coordinates of where the catches were made. These data shall be entered in the log book of each vessel.

2- These data shall be confidential and shall not be used for any purpose other than as specifically provided by the Agreement and this Protocol.

3- The Director shall transmit to the Council aggregate data by area and size of catch.

4- The Council shall determine the mechanisms of collection and analysis of these data.

5- In accordance with Article VI(B) of the Agreement, each Contracting Party shall establish and enforce appropriate penalties for failure of its vessels to comply with their obligations set forth in this Protocol.

H - The Contracting Parties will consult, as appropriate, with other States with a view to agreeing on the conditions of participation in this Agreement.

ANNEX 17

ECONOMIC FACTORS INFLUENCING DEVELOPMENT AND COOPERATION IN FISHERIES

by

James S. Campbell
Fisheries Consultant
New Zealand

INTRODUCTION

There are many political, social and economic factors to be considered in regard to the development of fisheries in the Pacific Basin. Politically, the nations of the Pacific want to maintain their freedom and to preserve their democratic right to govern themselves. Socially, they want to enjoy a way of life and better standards of living suitable for their geographic locations.

To achieve and maintain their political and social independence they must enjoy a degree of economic independence. The economic exploitation of the living resources of the sea is of vital importance to the achievement of these aims for the many developing countries, islands and territories in the Pacific. The situation in the Pacific in regard to fisheries development is in marked contrast with Europe where all the nations concerned with the proposed 200 mile exclusive economic zones enjoy a very high degree of economic development in fisheries.

Understanding of the different political, social and economic needs of all States and territories is essential if there is to be tolerance, cooperation and ultimately coordination in fisheries resources utilization.

The major problem in achieving cooperation in fisheries matters in the Pacific Basin is created by the wide differences in available resources, technological and economic development, food needs and access to markets. There are at one end of the scale those nations like Japan, with a very large population, dependent for its food needs on supplies from abroad. In the case of fisheries products these are either caught or bought.

At the other end of the scale there are islands and territories surrounded by sea with some fish resources (very often of a migratory nature), which represent one of the very few available natural resources of economic importance.

Thus we have within the Pacific Basin nations of great size and islands and territories of minute size by comparison. We have sophisticated developed economies and in contrast have the simple subsistence economies of the smaller territories.

All of these countries with their wide differences of size, population, natural resources, technological development, commercial competence, and living standards have in common a responsibility to conserve their fish resources while aiming at achieving optimum utilization of those resources.

There is thus a great need for understanding and tolerance together with an appreciation of the widely varying needs and aspirations of the different poeple. The proposal for 200 mile economic zones has brought into somewhat sharper focus the need for greater understanding and cooperation.

PRINCIPLES BEHIND PROPOSED 200 MILE EXCLUSIVE ECONOMIC ZONES

If we examine the single negotiating text which will form the basis for an international accord, we will see that the first requirements for coastal States are that they shall determine the allowable catch of the living resources in their exclusive economic zones and that they will ensure through proper conservation and management measures that the living resources are not endangered by over-exploitation.

They are further required to maintain or restore the populations of harvested species at levels which can produce the maximum sustainable yield as qualified by relevant environmental and economic factors, including the economic needs of coastal fishing communities and the special requirements of developing countries.

These are sound principles and worthy of acceptance in the spirit in which they have been composed. The ability to discharge these responsibilities must vary in the Pacific because of the wide differences in the sovereign States mentioned earlier.

ECONOMIC FACTORS AFFECTING THE DEVELOPING FISHING NATIONS

The loose classification of groups of nations into developing and developed nations can be somewhat misleading. Many nations which may be highly developed in other aspects of their economies may be developing countries in regard to fishing. These nations in my paper are included under the developing country label though not all of the points to be made will apply to them.

The following points are important for the States with developing fishing industries:

(1) There is an urgent need to assess the fishing resources. In this task many developing coastal States will need considerable technical and financial assistance from the developed nations.

(2) Management plans will need to be prepared after the total allowable catch of various species has been decided. In the preparation of these plans there will need to be a determination of fishing methods, mesh sizes, species and areas to be fished, size and types of vessels, quotas and other terms and conditions.

(3) Development plans, including the nomination of priorities and progressive economic stages of development, will have to be determined. These development plans must cover catching, processing, storage, transport and marketing. In all these aspects the developing coastal States will need assistance.

(4) The timetable for development will indicate the capacity of the coastal State to harvest the resources, often on a phasing-in basis. It will also indicate the extent of foreign fishing which may be permitted on a phasing-out basis.

(5) The development of local fisheries in many islands and territories may initially be of a subsistence nature, providing food for the local people, improving its handling and distribution. In these areas fishing development, even on this scale, is of economic importance.

(6) Where development of fishing resources leads to the production of more fish than the local people need, the export marketing of the fish is of serious economic consequence and may be a determining factor in the extent of development which can take place.

(7) Where the types of fish produced are in the luxury class such as tuna, prawns, lobster and so on, access to markets at profitable prices is not so difficult. Transport to markets, however, may seriously affect access and high freights may take a disproportionate amount of the realizations.

(8) Market access may be difficult for other fish species, especially if they are not commonly known in international markets. Coastal States will need considerable assistance in gaining access to markets.

(9) Any new fishery enterprise is faced today with much greater establishment, capital and operating costs, than those which apply in established fisheries. This places the developing nations at a competitive disadvantage against the established fishing nations, particularly those engaged in foreign fishing activities where the vessels have been purchased long before the current wave of inflation.

(10) This disparity in initial production costs must not be allowed to prevent the developing nations from utilizing their natural resources under the principles of the proposed Law of the Sea Agreement.

(11) The maintenance of economic freedom by developing coastal States requires that they receive help in all the areas mentioned above, freely and without mortgaging their future.

(12) In other words the assistance they receive in resource assessment, management plans, fisheries development and market access should be without entering into onerous obligations to grant fishing rights which may retard or restrict their own economic fishing development.

(13) The training needs of the developing nations are much greater than those of the developed nations. In the latter there is a large pool of technological competence available. In some Pacific nations and territories there are relatively few technically qualified people who could move into fishing development from other industries.

ECONOMIC FACTORS AFFECTING THE DEVELOPED FISHING NATIONS

There are also many differences between the nations which could be classified as developed fishing nations. Some are highly developed in all aspects of fishing with a hughe investment in fishing tonnage, great technological competence, and access to large domestic and export markets.

Other nations may have a partial development in fisheries. This is often linked to the more profitable high demand export fisheries such as tuna, lobster and prawns, but with much less development in trawling and other types of fishing.

Some of the economic factors which affect the developed fishing nations are:

(1) Some of the nations with large populations are dependent on fish as an important traditional source of animal protein.

(2) These nations have either caught or bought the fish with greater emphasis on catching the fish often in foreign waters which will now be within the 200 mile exclusive fishing zones of other nations.

(3) Already the impact of increased oil prices and the escalation of other costs, together with declining stocks of popular fish species through over-fishing, has made distant water fishing less profitable. Inevitably some economic hardship has been felt by distant water fishing nations.

(4) This form of economic hardship should be separated from any further economic constraints which may result from the contraction of areas where these nations can fish as the law of the sea provisions are implemented.

(5) The economic effects of reduced or limited access to fishing grounds, or reduced quotas where access continues, will be to make a considerable tonnage of fishing vessels redundant and cause some unemployment among their crews.

(6) The short term redeployment of these vessels on grounds which are still unprotected would be just a palliative for the foreign fishing nation and an irritation to the nation on whose fishing grounds the redeployment takes place.

(7) Falling supplies of certain types of fish will affect shore-side industries in processing, manufacturing, distribution and marketing.

(8) There may be an initial overall reduction in the world catch of the more popular species of fish as coastal States assume their full responsibilities for resource management.

(9) This may create more favourable market conditions for the currently less preferred fish species. They could fill the shortfall in the popular species which have suffered from over-fishing.

(10) Developed nations whose supplies of fish may be affected by the restrictions on their fishing activities, could supplement their reduced catches by buying more fish from other nations. This would help the development of those nations, particularly in the Pacific, whose development will be dependent upon access to markets.

(11) This would lessen the adverse economic effects on the manufacturing and marketing sections of the fishing industry in the distant water fishing nations.

(12) Any contraction of fishing effort must bring repercussions and hardship. This is a continuing process in the development of the fishing industry and the trade in fish.

(13) The 200 mile exclusive economic zone concept is the direct result of over-fishing in most of the world's fishing grounds. The changes caused by the implementation of the law of the sea principles merely anticipates what would have inevitably happened if the world's fishing capacity had continued to far exceed the available catch of the popular fish species.

HOW CAN COOPERATION IN PACIFIC FISHING DEVELOPMENT BE ACHIEVED?

The brief statement of the main economic factors affecting the developing and developed fishing nations in the Pacific illustrate a wide difference in interests, aims and aspirations.

Cooperation in fishing industry development will only be achieved on a harmonious and lasting basis if certain conditions apply. In my opinion the important points which must be considered are:

(1) Every nation must understand the forces and the pressures which are motivating the others.

(2) Many of the interests and motives are likely to be in conflict. Therefore, understanding and tolerance are essential ingredients for the achievement of genuine cooperation.

(3) Fishing industry development in the Pacific will be retarded if there is not a very high degree of cooperation.

(4) One of the more obvious areas of common interest where cooperation can develop is in the determination and assessment of resources.

(5) Already various international agencies are involved in coordinating research. There is no doubt that this coordinated research into the resources, particularly the migrating species, will be of benefit to every Pacific nation.

(6) The most important preliminary to cooperation in fisheries matters throughout the Pacific is the willing acceptance of the spirit and the principles behind the proposed Law of the Sea Agreement on the Living Resources.

(7) There is reluctance on the part of some nations to accept these principles until they are finally given international approval. However, they are so close to that approval, or at least to practical acceptance, that there would appear to be no valid reason why the spirit of the proposed agreement should not already be influencing our actions and our approach to Pacific Basin cooperation.

(8) The proposed obligations which can be placed on fishing nations granted fishing rights in exclusive economic zones are clearly set out in the single negotiating text.

(9) Immediate observance of these obligations would be the first step in achieving cooperation in the field of fisheries conservation and management which is given so much importance in the proposed agreement.

(10) Failure by foreign fishing nations to observe now such fundamental obligations as the provision of detailed catch data, the legal mesh sizes, and other normal conservation measures is not evidence of a cooperative spirit. Such failures now must influence coastal States in offering cooperation in the future and this is a negation of what is needed.

(11) Voluntary cooperation is true cooperation - complying with laws and regulations is merely observing the letter and not the spirit.

(12) Cooperation and development may take many forms, for example aid schemes, joint ventures, exchange of technology, training of operatives, market development.

(13) One common requirement should be that cooperation and development in the Pacific should be arranged so that the recipient of aid is not placed under an obligation to grant rights or concessions in exchange.

(14) My own opinion of real cooperation is that it is mutually rewarding provided the objectives and the principles of cooperation are observed.

(15) In the context of the Pacific nations with their very wide differences in economic development, there must be strong reservations about trading deals. I do not believe that trading long term fishing rights to a technologically developed nation by a very much under-developed nation for short term assistance in development is an example of real cooperation.

(16) Therefore, if we are to set the very elusive aim of achieving a truly cooperative spirit, there must be aid without obligations. Joint ventures must be mutually rewarding and absolutely fair to both sides. Technology exchanges and training of operators should be without tags.

(17) The provision of processing and packaging know-how is a normal thing between buyer and seller and will come naturally from improved trading relationships.

(18) Access to markets, however, is another issue. In the past, protective barriers have been erected in important fish markets against the very fish which the nations concerned are catching in the waters of other coastal States. Improved cooperation must surely extend to the opening up of markets in fish to the new fishing industries in developing countries. Improved trading must help the purchasing country which needs the fish because of supply adjustments, as well as assisting the coastal State which must develop its fishing industry.

CONCLUSION

It is not possible in the short space of thirty minutes to produce a blueprint for development of cooperation in fisheries in the Pacific. This warrants a much more serious study.

I have tried to highlight important factors which affect development and cooperation in order to stimulate thinking and discussion. There are compelling pressures on all sides and the more they are likely to conflict, the greater is the need for understanding, tolerance and cooperation.

The frank exchange of information and views is always a good starting point on the road to understanding and to cooperation.

ANNEX 18

SOUTH PACIFIC FORUM FISHERIES AGENCY: RELEVANT AGREEMENTS IN FFA COUNTRIES

CONVENTION

The Governments comprising the South Pacific Forum:

Noting the Declaration on the Law of the Sea and a Regional Fisheries Agency adopted at the 8th South Pacific Forum held in Port Moresby in August 1977.

Recognizing their common interest in the conservation and optimum utilization of the living marine resources of the South Pacific region and in particular of the highly migratory species.

Desiring to promote regional cooperation and coordination in respect of fisheries policies.

Bearing in mind recent developments in the Law of the Sea.

Concerned to secure the maximum benefits from the living marine resources of the region for their people and for the region as a whole and in particular the developing countries.

Desiring to facilitate the collection, analysis, evaluation and dissemination of relevant statistical scientific and economic information about the living marine resources of the region, and in particular the highly migratory species.

Have agreed as follows:

Article I
Agency

1. There is hereby established a South Pacific Forum Fisheries Agency.
2. The Agency shall consist of a Forum Fisheries Committee and a Secretariat.
3. The seat of the Agency shall be at Honiara, Solomon Islands.

Article II
Membership

Membership of the Agency shall be open to:

A. Members of the South Pacific Forum.

B. Other States or territories in the region on the recommendation of the Committee and with the approval of the Forum.

Article III
Recognition of Coastal States' Rights

1. The Parties to this Convention recognize that the coastal State has sovereign rights, for the purpose of exploring and exploiting, conserving and managing the living marine resources, including highly migratory species, within its exclusive economic zone or fishing zone, which may extend 200 nautical miles from the baseline from which the breadth of its territorial sea is measured.

2. Without prejudice to paragraph (1) of this Article, the Parties recognize that effective cooperation for the conservation and optimum utilization of the highly migratory species of the region will require the establishment of additional international machinery to provide for cooperation between all coastal States in the region and all States involved in the harvesting of such resources.

Article IV
Committee

1. The Committee shall hold a regular session at least once every year. A special session shall be held at any time at the request of at least four Parties. The Committee shall endeavour to take decisions by consensus.

2. Where consensus is not possible each Party shall have one vote and decisions shall be taken by a two-thirds majority of the Parties present and voting.

3. The Committee shall adopt such rules of procedure and other internal administrative regulations as it considers necessary.

4. The Committee may establish such sub-committees, including technical and budget sub-committee as it may consider necessary.

5. The South Pacific Bureau for Economic Cooperation (SPEC) may participate in the work of the Committee. States, territories and other international organizations may participate as observers in accordance with such criteria as the Committee may determine.

Article V
Functions of the Committee

1. The function of the Committee shall be as follows:

   a. To provide detailed policy and administrative guidance and direction to the Agency.

   b. To provide a Forum for Parties to consult together on matters of common concern in the field of fisheries.

   c. To carry out such other functions as may be necessary to give effect to this Convention.

2. In particular, the Committee shall promote intra-regional coordination and cooperation in the following fields:

   a. Harmonization of policies with respect to fisheries management.

   b. Cooperation in respect of relations with distant water fishing countries.

   c. Cooperation in surveillance and enforcement.

   d. Cooperation in respect of onshore fish processing.

   e. Cooperation in marketing.

   f. Cooperation in respect of access to the 200 mile zones of other Parties.

Article VI
Director, Staff and Budget

1. The Committee shall appoint a Director of the Agency on such conditions as it may determine.

2. The Committee may appoint a Deputy Director of the Agency on such conditions as it may determine.

3. The Director may appoint other staff in accordance with such rules and on such conditions as the Committee may determine.

4. The Director shall submit to the Committee for approval:

   a. An annual report on the activities of the Agency for the preceding year.

   b. A draft work programme and budget for the succeeding year.

5. The approved report, budget and work programme shall be submitted to the Forum.

6. The budget shall be financed by contributions according to the shares set out in the Annex to this Convention. The Annex shall be subject to review from time to time by the Committee.

7. The Committee shall adopt financial regulations for the administration of the finances of the Agency. Such regulations may authorize the Agency to accept contributions from private or public sources.

8. All questions concerning the budget of the Agency, including contributions to the budget, shall be determined by the Committee.

9. In advance of the Committee's approval of the budget, the Agency shall be entitled to incur expenditure up to a limit not exceeding two-thirds of the preceding year's approved budgetary expenditure.

Article VII
Functions of the Agency

Subject to direction by the Committee, the Agency shall:

(a) Collect, analyse, evaluate and disseminate to Parties relevant statistical and biological information with respect to the living marine resources of the region and in particular the highly migratory species.

(b) Collect and disseminate to Parties relevant information concerning management procedures, legislation and agreements adopted by other countries, both within and beyond the region.

(c) Collect and disseminate to Parties relevant information on prices, shipping, processing and marketing of fish and fish products.

(d) Provide, on request, to any Party technical advice and information, assistance in the development of fisheries policies and negotiations, and assistance in the issue of licences, the collection of fees or in matters pertaining to surveillance and enforcement.

(e) Seek to establish working arrangements with relevant regional and international organizations, particularly the South Pacific Commission.

(f) Undertake such other functions the Committee may decide.

Article VIII
Legal Status, Privileges and Immunities

1. The Agency shall have legal personality and in particular the capacity to contract, to acquire and dispose of movable and immovable property and to sue and be sued.

2. The Agency shall be immune from suit and other legal process and its premises, archives and property shall be inviolable.

3. Subject to approval by the Committee the Agency shall promptly conclude an agreement with the Government of Solomon Islands providing for such privileges and immunities as may be necessary for the proper discharge of the functions of the Agency.

Article IX
Information

The Parties shall provide the Agency with available and appropriate information, including:

(a) Catch and effort statistics in respect of fishing operations in waters under their jurisdiction or conducted by vessels under their jurisdiction.

(b) Relevant laws, regulations and international agreements.

(c) Relevant biological and statistical data.

(d) Action with respect to decisions taken by the Committee.

Article X
Signature, Accession, Entry into Force

1. This Convention shall be open for signature by members of the South Pacific Forum.

2. This Convention is not subject to ratification and shall enter into force 30 days following the eighth signature. Thereafter it shall enter into force for any signing or acceding State 30 days after signature or the receipt by the depositary of an instrument of accession.

3. This Convention shall be deposited with the Government of Solomon Islands (herein referred to as the depositary) who shall be responsible for its registration with the United Nations.

4. States or territories admitted to membership of the Agency in accordance with Article II(B) shall deposit an instrument of accession with the depositary.

5. Reservations to this Convention shall not be permitted.

Article XI
Withdrawal and Amendment

1. Any Party may withdraw from this Convention by giving written notice to the depositary. Withdrawal shall take effect one year after receipt of such notice.

2. Any Party may propose amendments to the Convention for consideration by the Committee. The text of any amendments shall be adopted by a unanimous decision. The Committee may determine the procedures for the entry into force of amendments to this Convention.

EXTRACT FROM FFC DECISIONS - MAY 1982

Harmonization Workshop Recommendations

The FFC decided on a plan for the implementation of the recommendations from the Workshop on the Harmonization and Coordination of Fisheries Regimes and Access Agreements, as follows:

A. The FFC recommends to Forum that the following action with regard to foreign fishing vessels should be taken by Forum countries, together with other participating countries:

i) A regional register of foreign fishing vessels be established at the Forum Fisheries Agency.

ii) Only vessels which are accorded "good standing" status on the register be granted fishing licences in the region, in accordance with detailed arrangements to be agreed by member countries.

iii) Uniform vessel identification requirements be adopted (the international radio call sign or, in its absence, the number from the regional register).

iv) Countries acquiring information from apprehended foreign fishing vessels concerning illegal activities in other fisheries zones pass such information on to FFA for recording and informing any FFA member or observer country whose interests may be affected.

B. The FFC recommends to Forum that the following harmonized minimum standards for foreign fishing vessels access should be adopted at this stage by Forum countries, together with other participating countries:

i) Foreign fishing vessels, 20 gross registered tons or over, be required to comply with the following minimum reporting conditions while in the fisheries zone of a country in which they are licensed to fish:

- Give notice to FFA of the licensing country of entry into and departure from any zone or port.
- Regularly report position and catch to FFA or the licensing country.

ii) Foreign fishing vessels be required to complete standard regional tuna catch and effort log sheets, while in the fisheries zone of the licensing country, and to return such sheets directly to the regional agency (SPC) or the licensing country for processing within 45 days after completion of the voyage.

iii) Flag States or, in the absence of access agreements with flag States, the appropriate national fishermen's organizations be required in agreements to take measures to ensure compliance by their fishing vessels with coastal State laws.

iv) Provision be made for on-board observers and port calls when required by the licensing country.

v) Foreign fishing vessels navigating through ("transiting") the fisheries zone be required to have all fishing equipment on board stowed or secured in such a manner that it is not readily available to use for fishing.

NAURU AGREEMENT CONCERNING COOPERATION IN THE MANAGEMENT OF FISHERIES OF COMMON INTEREST

The Federated States of Micronesia, the Republic of Kiribati, the Marshall Islands, the Republic of Nauru, the Republic of Palau, Papua New Guinea, and Solomon Islands:

Taking into account the work of the Third United Nations Conference on the Law of the Sea.

Noting that, in accordance with the relevant principles of international law, each of the Parties has established an exclusive economic zone or fisheries zone (hereinafter respectively called "the Fisheries Zones") which may extend 200 nautical miles from the baselines from which their respective territorial seas are measured and within which they respectively and separately exercise sovereign rights for the purposes of exploring, exploiting, conserving and managing all living marine resources.

Having regard to the objectives of the South Pacific Forum Fisheries Agency Convention and in particular the promotion of regional cooperation and co-ordination of fisheries policies and the need for the urgent implementation of these objectives through regional or sub-regional arrangements.

Conscious of the exploitation of the common stocks of fish, both within the Fisheries Zones and in the waters adjacent thereto, by the distant water fishing nations.

Mindful of their dependence, as developing island States, upon the rational development and optimum utilization of the living resources occurring within the Fisheries Zones and, in particular, the common stocks of the fish therein.

Recognizing that only by cooperation in the management of the Fisheries Zones may their people be assured of receiving the maximum benefits from such resources.

Desirous of establishing, without prejudice to the sovereign rights of each Party, arrangements by which this may be achieved.

Have agreed as follows:

Article I

The Parties shall seek, without any derogation of their respective sovereign rights, to coordinate and harmonize the management of fisheries with regard to common stocks within the Fisheries Zones, for the benefit of their people.

Article II

The Parties shall seek to establish a coordinated approach to the fishing of the common stocks in the Fisheries Zones by foreign fishing vessels, and in particular:

(a) Shall establish principles for the granting of priority to applications by fishing vessels of the Parties to fish within the Fisheries Zones over other foreign fishing vessels.

(b) Shall establish, as a minimum, uniform terms and conditions under which the Parties may license foreign fishing vessels to fish within the Fisheries Zones regarding:

i) The requirement that each foreign fishing vessel apply for and posses a licence or permit.

ii) The placement of observers on foreign fishing vessels.

iii) The requirement that a standardized form of log book be maintained on a day-to-day basis which shall be produced at the direction of the competent authorities.

iv) The timely reporting to the competent authorities of required information concerning the entry, exit and other movement and activities of foreign fishing vessels within the Fisheries Zones.

v) Standardized identification of foreign fishing vessels.

(c) Seek to establish other uniform terms and conditions under which the Parties may license foreign fishing vessels to fish within the Fisheries Zones, including:

i) The payment of an access fee, which shall be calculated in accordance with principles established by the Parties.

ii) The requirement to supply to the competent authorities complete catch and effort data for each voyage.

iii) The requirement to supply to the competent authorities such additional information as the Parties may determine to be necessary.

iv) The requirement that the flag State or organizations having authority over a foreign fishing vessel take such measures as are necessary to ensure compliance by such vessel with the relevant fisheries laws of the Parties.

v) Such other terms and conditions as the Parties may, from time to time, consider necessary.

Article III

The Parties shall seek to standardize their respective licensing procedures and in particular:

(a) Seek to establish and adopt uniform measures and procedures relating to the licensing of foreign fishing vessels, including application formats, licensing formats and other relevant documents.

(b) Explore the possibility of establishing, without prejudice to the respective sovereign rights of the Parties, a centralized licensing system of foreign fishing vessels.

Article IV

The Parties shall seek the assistance of the South Pacific Forum Fisheries Agency in establishing procedures and administrative arrangements for the exchange and analysis of:

(a) Statistical data concerning catch and effort by fishing vessels in the Fisheries Zones relating to the common stocks of fish.

(b) Information relating to vessel specifications and fleet composition.

Article V

1. The Parties shall seek the assistance of the South Pacific Forum Fisheries Agency in providing secretariat services for implementing and coordinating the provisions of this Agreement.

2. An annual meeting of the Parties shall be convened preceding or following the regular session of the Forum Fisheries Committee in order to promote the implementation of this Agreement. Additional meetings may be convened at the request of three or more Parties. Such requests shall be communicated to the Director of the Forum Fisheries Agency who will inform the other Parties.

3. With the concurrence of the Parties, members of the South Pacific Forum Fisheries Agency, not Parties to this Agreement, may attend - as observers - the meetings referred to in this Article.

Article VI

The Parties shall, where appropriate, cooperate and coordinate the monitoring and surveillance of foreign fishing activities by:

(a) Arranging for the rapid exchange of information collected through national surveillance activities.

(b) Exploring the feasibility of joint surveillance.

(c) Developing other appropriate measures.

Article VII

The Parties shall seek to develop cooperative and coordinated procedures to facilitate the enforcement of their fisheries laws and shall in particular examine the various means by which a regime of reciprocal enforcement may be established.

Article VIII

Nothing contained in this Agreement shall be construed as a derogation of any of the rights and obligations undertaken by any of the Parties under the South Pacific Forum Fisheries Agency Convention or any other international agreement in effect on the date on which this Agreement enters into force.

Article IX

The parties shall conclude arrangements where necessary to facilitate the implementation of the terms and to attain the objectives of this Agreement. The Parties concluding such arrangements shall lodge copies with the depositary of this Agreement.

Article X

1. This Agreement shall be open for signature by the States named in the preamble hereto and shall be subject to ratification.

2. This Agreement shall enter into force 30 days following receipt by the depositary of the fifth instrument of ratification. Thereafter it shall enter into force for any signing or acceding State 30 days after receipt by the depositary of an instrument of ratification or accession.

3. This Agreement shall be deposited with the Government of Solomon Islands which shall be responsible for its registration with the United Nations.

4. Following entry into force, this Agreement shall be open for accession by other States with the concurrence of all of the Parties to this Agreement.

5. Reservations to this Agreement shall not be permitted.

Article XI

1. This Agreement is a binding international agreement concluded among States and is governed by international law.

2. Any Party may withdraw from this Agreement by giving written notice to the depositary. Withdrawal shall take effect one year after receipt of such notice.

3. Any amendments to this Agreement proposed by a Party shall only be adopted by unanimous decision of the Parties.

In witness whereof the undersigned, duly authorised by their respective Governments, have signed the Agreement.

Done at Nauru, this 11th day of February, One Thousand Nine Hundred and Eighty Two.

For the Government of the Federated States of Micronesia

For the Government of the Republic of Kiribati

For the Government of the Marshall Islands

For the Government of the Republic of Nauru

For the Government of the Republic of Palau

For the Government of Papua New Guinea

For the Government of Solomon Islands

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